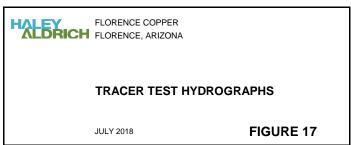


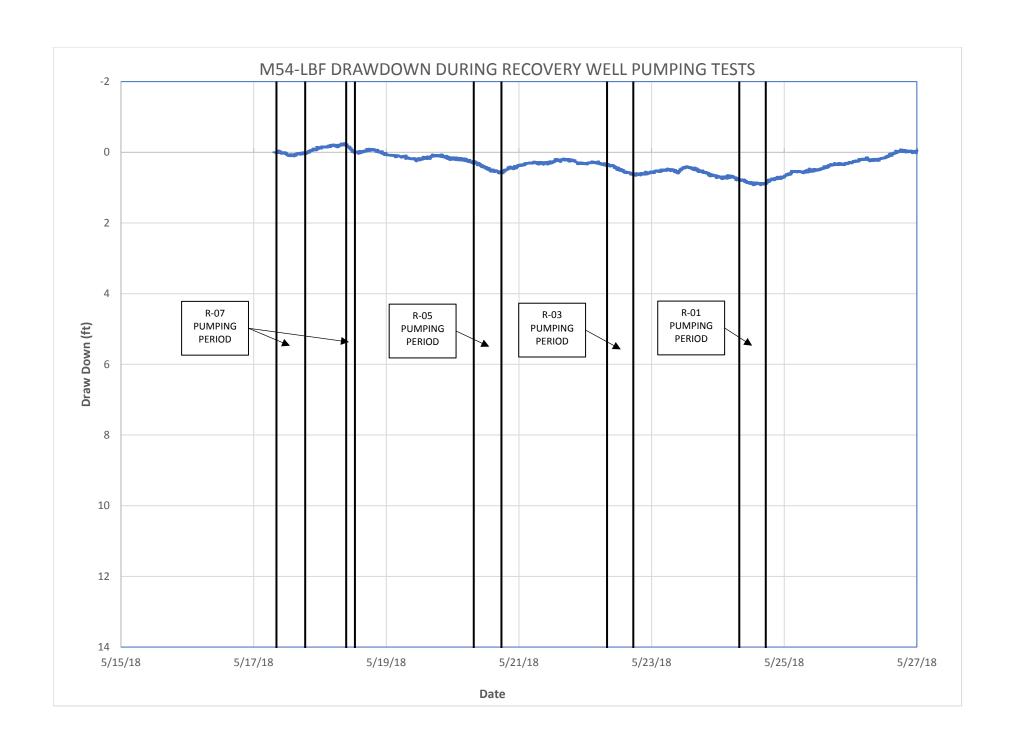
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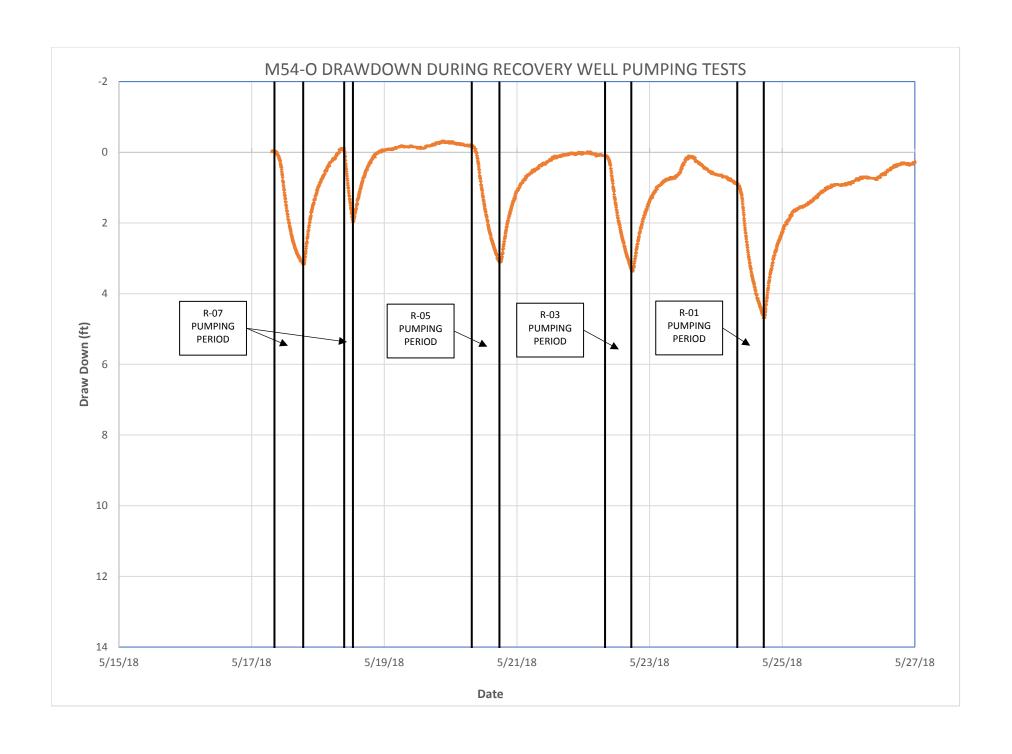
1. Transducer data are based on compensated values. Drawdown data based on water head above transducer data.

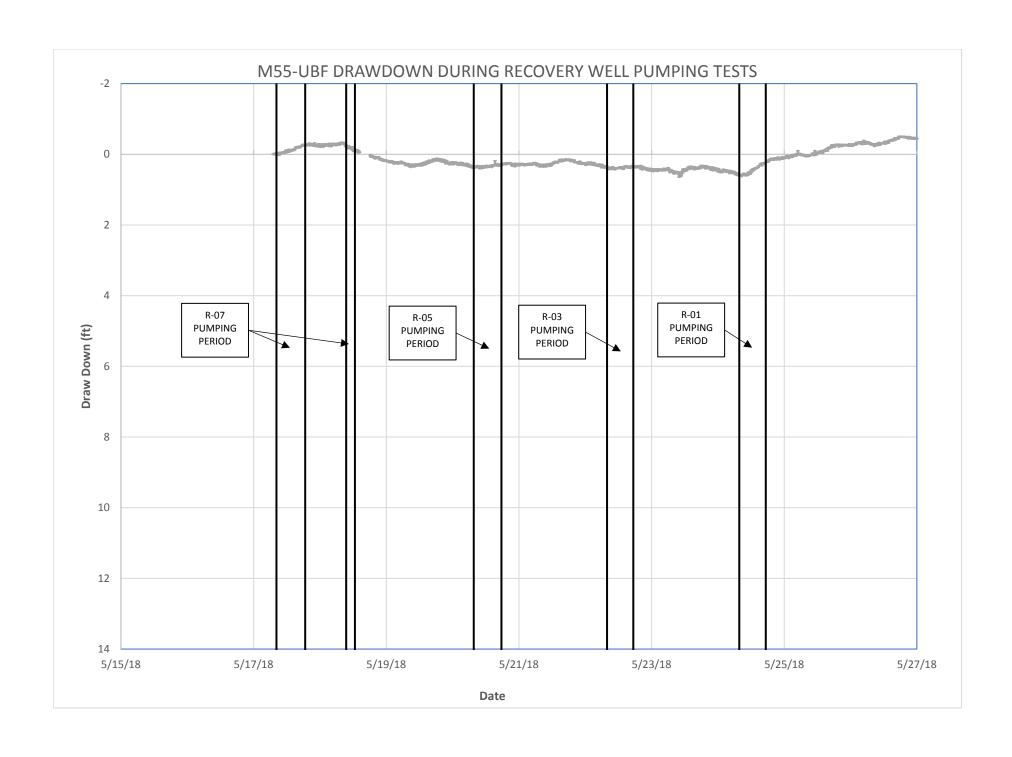


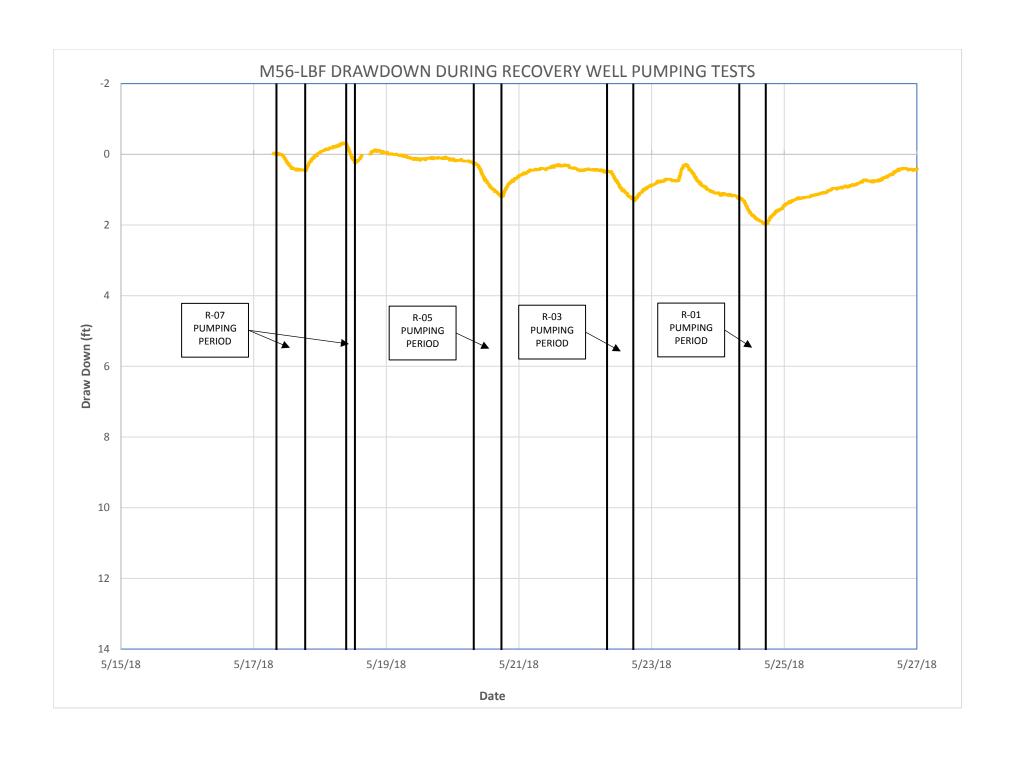
## **APPENDIX A**

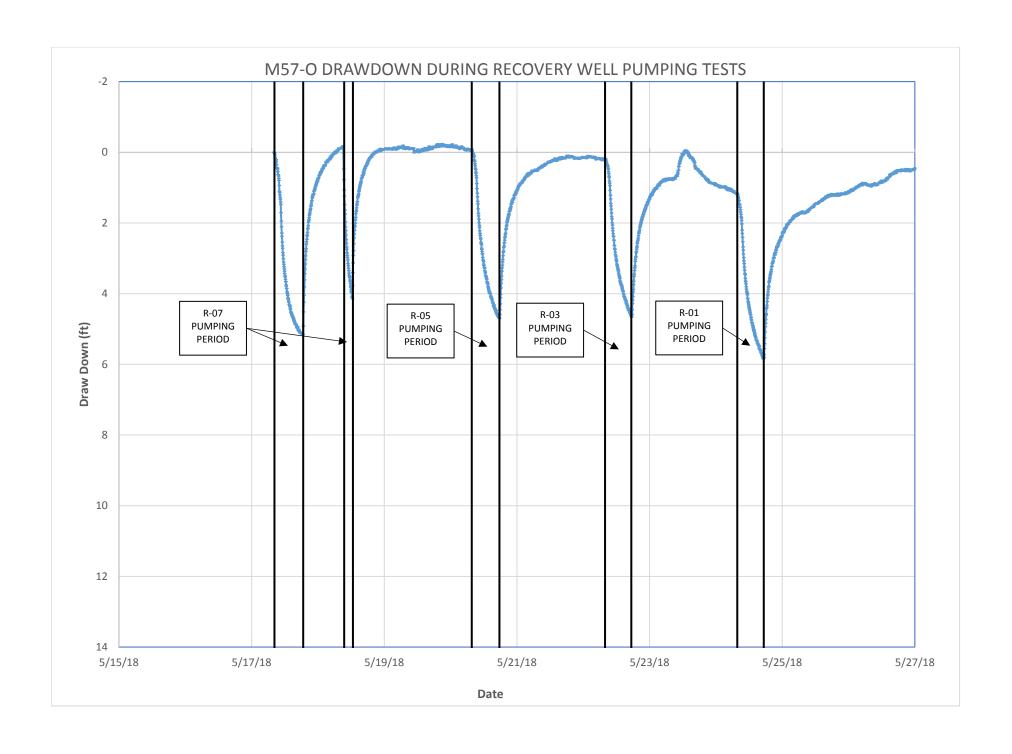
**Monitoring Well Hydrographs** 

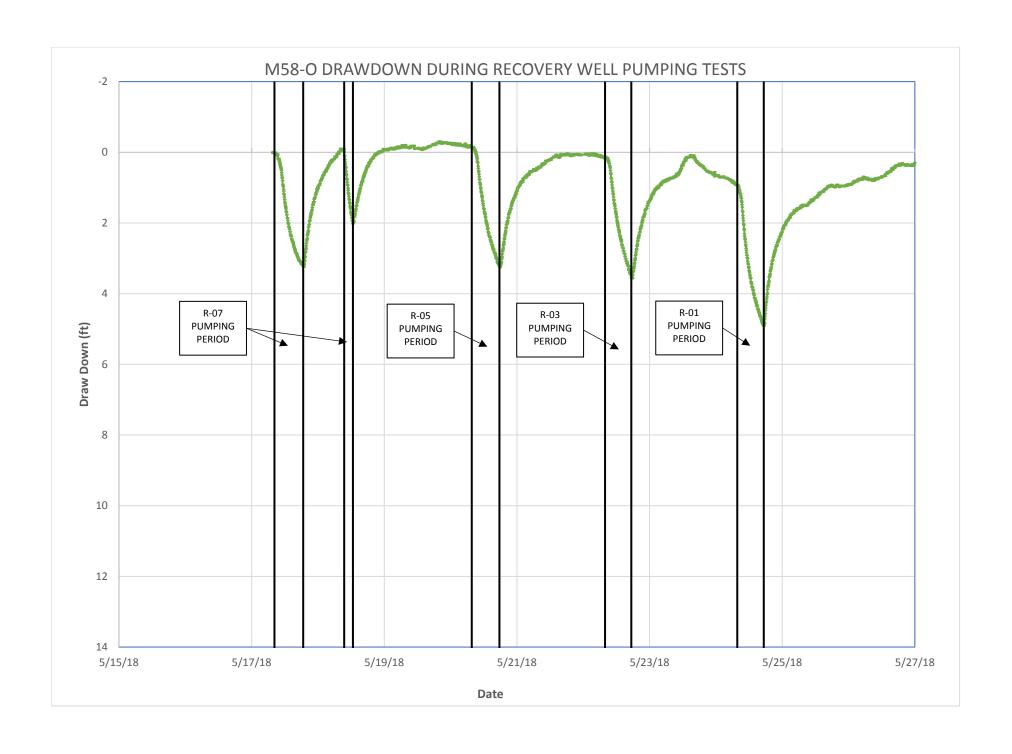


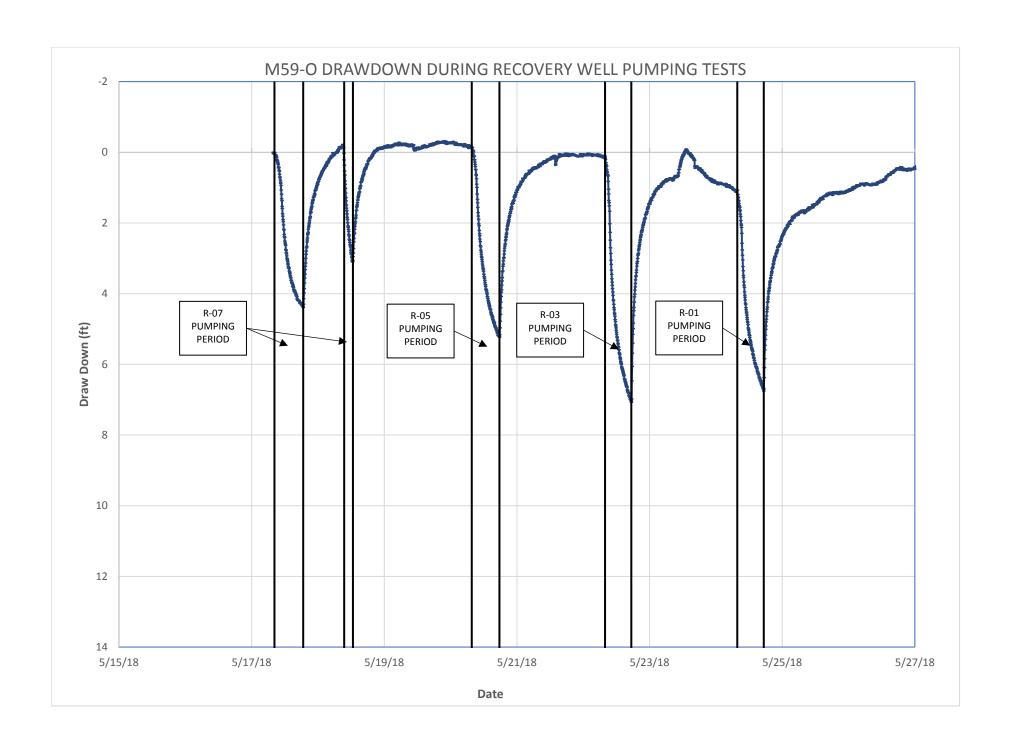


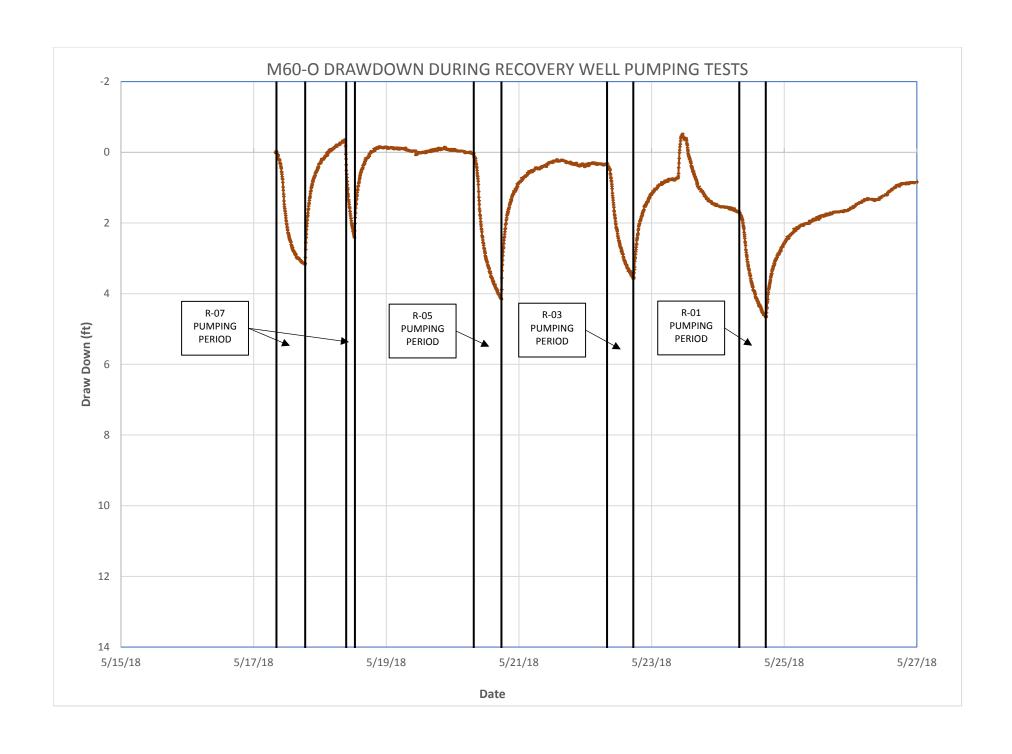


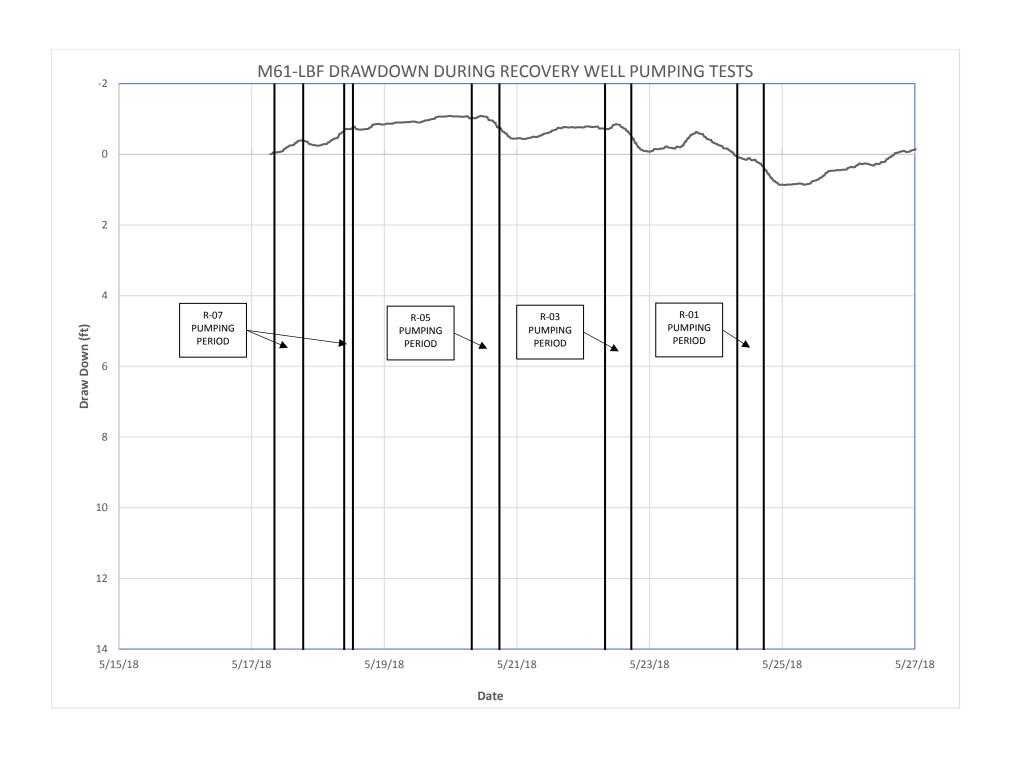


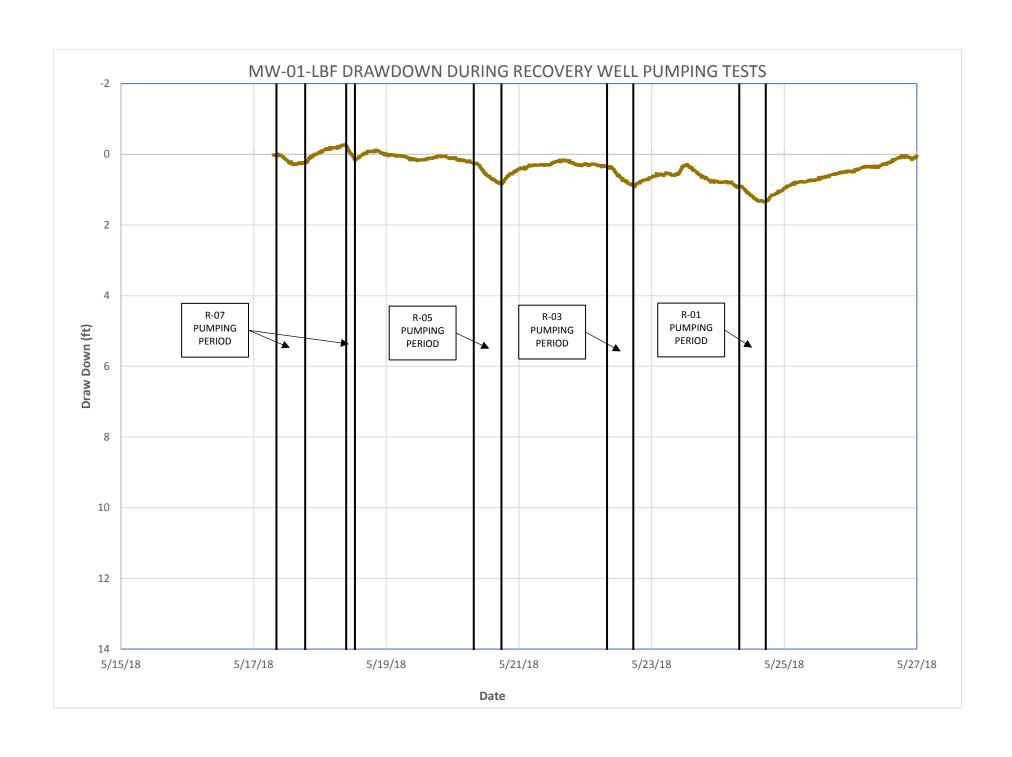


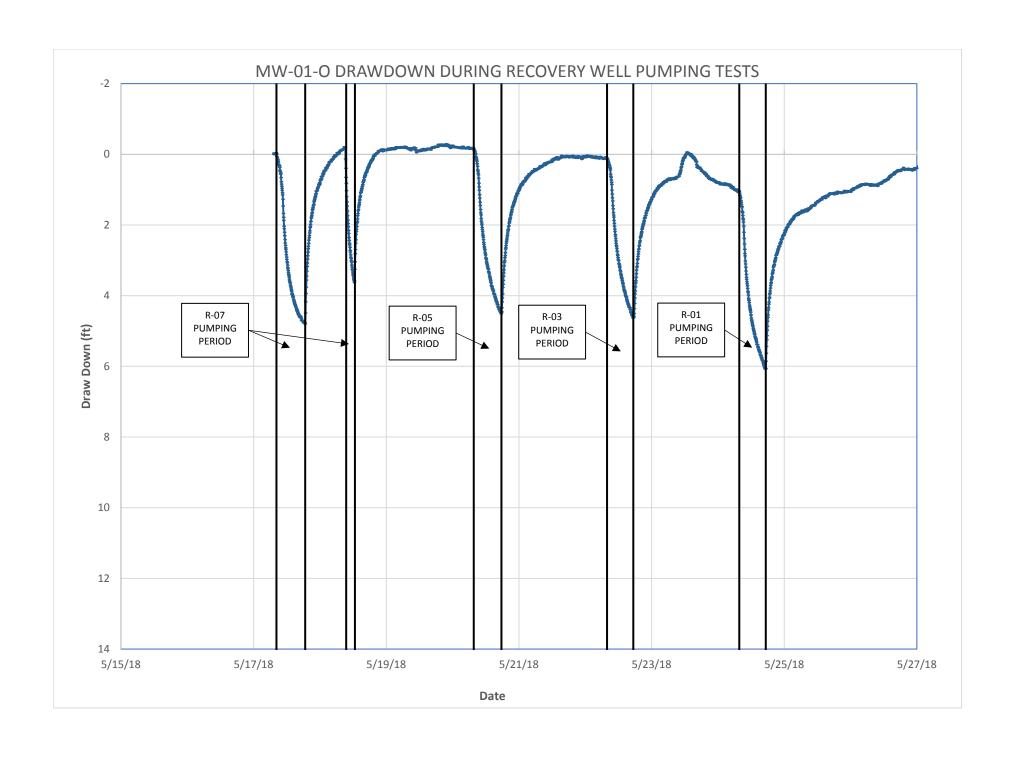






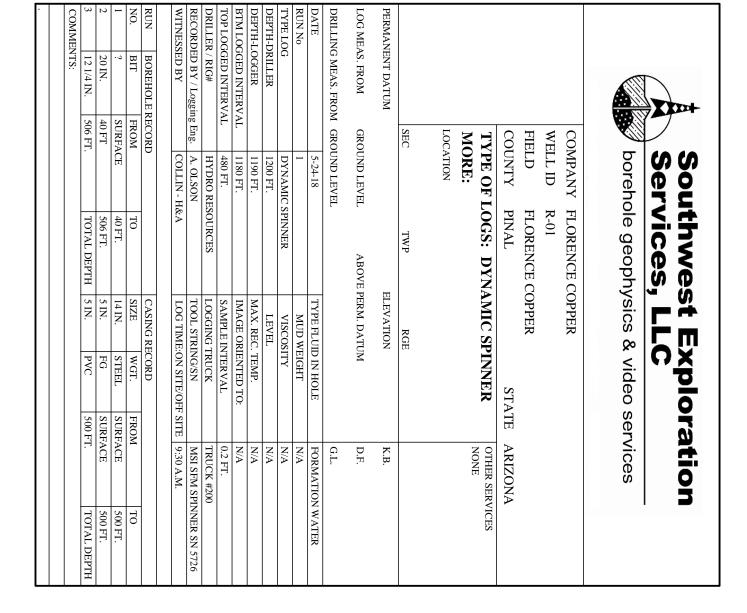






## **APPENDIX B**

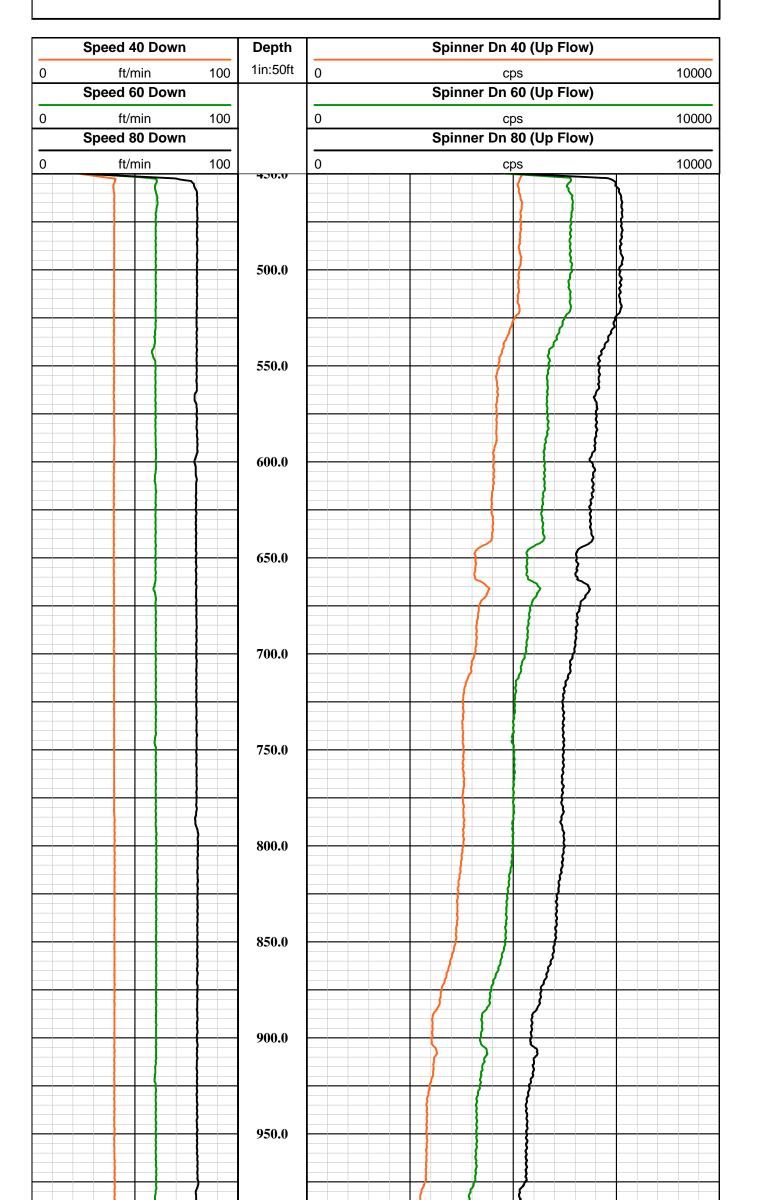
**Spinner Flow Profiling Raw Data** 

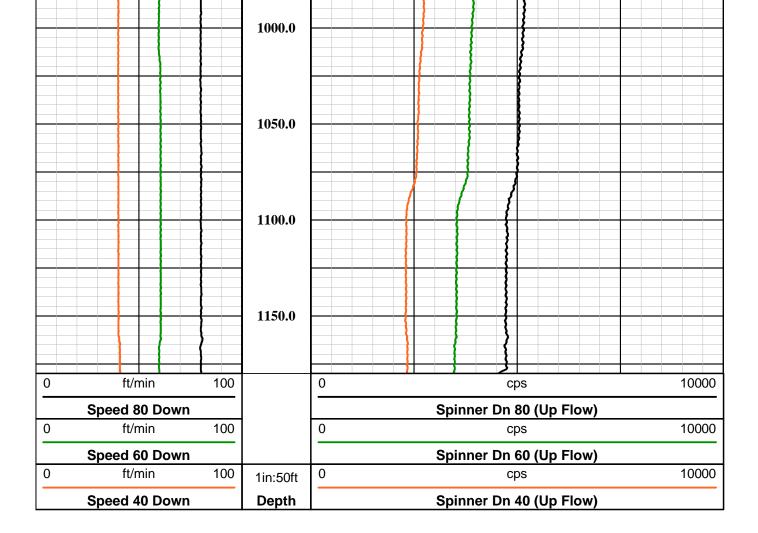


Tool Summary:					
Date	5-24-18	Date		Date	
Run No.	1	Run No.	2	Run No.	3
Tool Model	MSI SFM SPINNER	Tool Model		Tool Model	
Tool SN	5726	Tool SN		Tool SN	
From	480 FT.	From		From	
То	1180 FT.	То		То	
Recorded By	A. OLSON	Recorded By		Recorded By	
Truck No	200	Truck No		Truck No	
Operation Check	5-14-18	Operation Check		Operation Check	
Calibration Check	5-14-18	Calibration Check		Calibration Check	
Time Logged	11:00 A.M.	Time Logged		Time Logged	
Data		Data		Data	
Date		Date		Date	
Run No.	4	Run No.	5	Run No.	6
Tool Model		Tool Model		Tool Model	
Tool SN		Tool SN		Tool SN	
From		From		From	
То		То		То	
Recorded By		Recorded By		Recorded By	
Truck No		Truck No		Truck No	
Operation Check		Operation Check		Operation Check	
Calibration Check		Calibration Check		Calibration Check	
Time Logged		Time Logged		Time Logged	
Additional Comments:					
Caliper Arms Used: N/A Calibration Points: N/A					
E-Log Calibration	Range: N/A	Calibr	ation Points:	N/A	-
1					

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## MSI QL-40 Spinner Flowmeter (SFM) SN 5726

Probe Top = Depth Ref.

Single Conductor MSI Probe Top

Probe Length = 0.90 m or 2.95 ft Probe Weight = 3.25 kg or 7.2 lbs

Operating Temperature: 80 Deg C (176 Deg F)

Presure Rating: 200 bar (2900 psi)

Two impeller cage sizes: 3" and 4"

Tool is run centeralized. Depending on well diamter, a weight bar may be added to the assembly.

Can be used in static wells or under pumping conditions.

Measures both upflow and downflow.

Minimum Flow Rate: 3-5 gpm Maximum Flow Rate: 5000 gpm





### 1.57" or 40 mm Diameter (Cage dependent)



Company FLORENCE COPPER

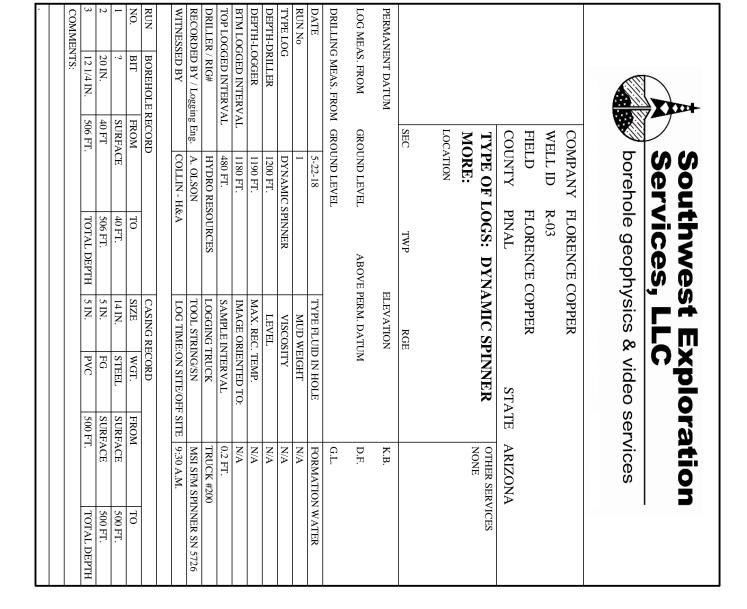
Well R-01

Field FLORENCE COPPER

County PINAL State ARIZONA

Preliminary Dyi

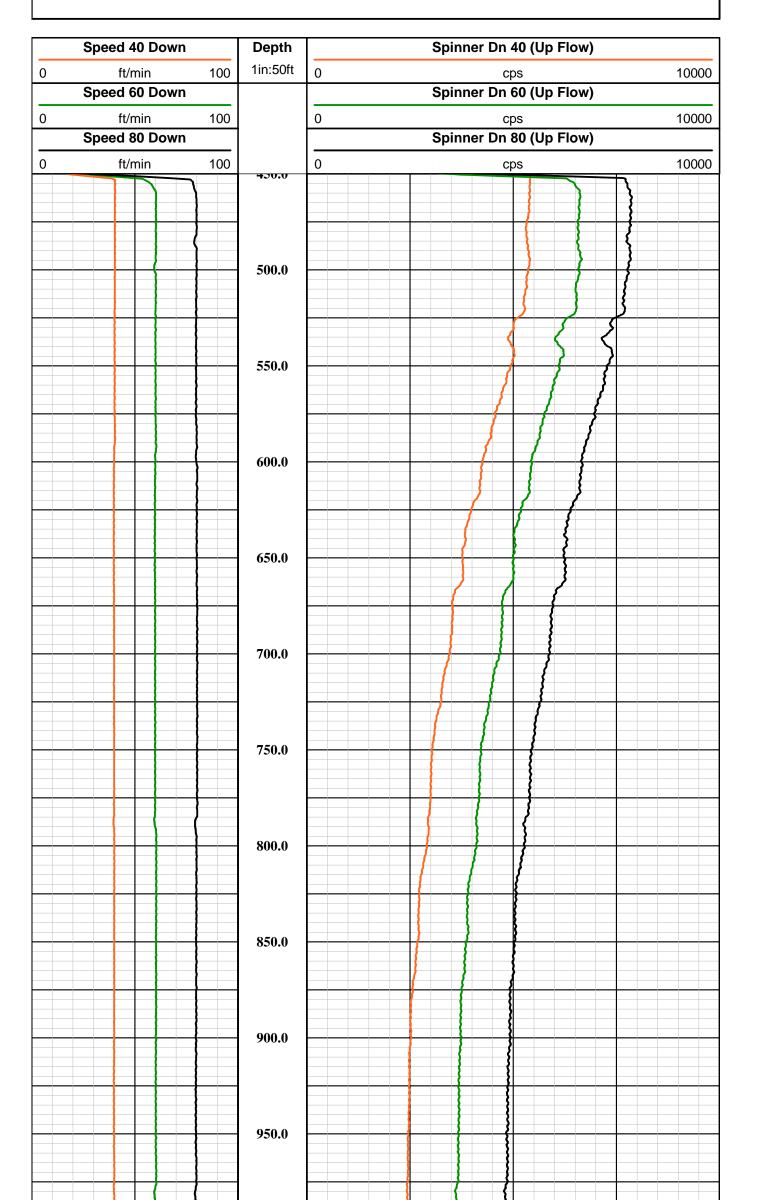
**Dynamic Spinner Summary** 

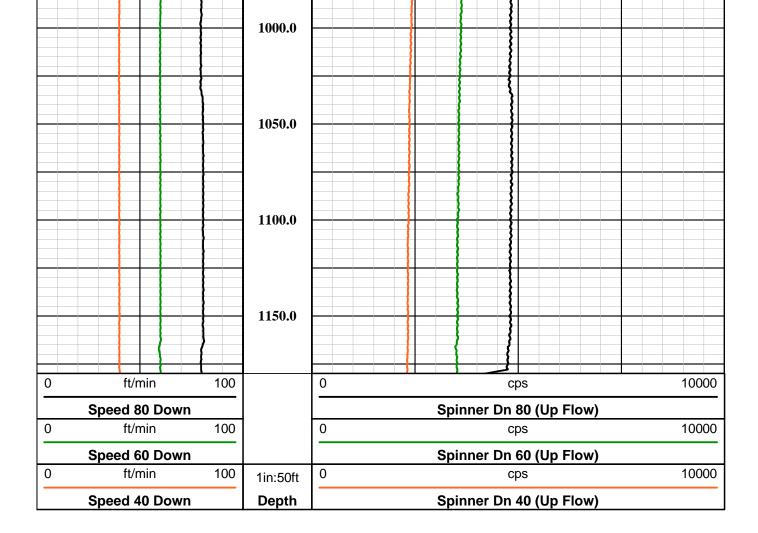


Date         5-22-18         Date           Run No.         1         Run No.         2           Tool Model         MSI SFM SPINNER         Tool Model           Tool SN         5726         Tool SN           From         480 FT.         From           To         1180 FT.         To           Recorded By         A. OLSON         Recorded By           Truck No         200         Truck No           Operation Check         5-14-18         Operation Check           Calibration Check         5-14-18         Calibration Check           Time Logged         11:00 A.M.         Time Logged           Date         Run No.         5           Run No.         4         Run No.         5           Tool Model         Tool Model         Tool SN           From         From         Tool SN           From         From         Tool Sn           From         From         Tool Sn           From         Tool Sn         Recorded By           Truck No         Operation Check         Operation Check           Calibration Check         Calibration Check           Time Logged         Time Logged	Date	
Tool SN 5726 Tool SN From 480 FT. From To 1180 FT. To Recorded By A. OLSON Recorded By Truck No 200 Truck No Operation Check 5-14-18 Operation Check Calibration Check 5-14-18 Calibration Check Time Logged 11:00 A.M. Time Logged  Date Date Run No. 4 Run No. 5 Tool Model Tool SN From From To To Recorded By Recorded By Truck No Operation Check Calibration Check Time Logged Time Logged	Run No.	3
From 480 FT. From To 1180 FT. To Recorded By A. OLSON Recorded By Truck No 200 Truck No Operation Check 5-14-18 Operation Check Calibration Check 5-14-18 Calibration Check Time Logged 11:00 A.M. Time Logged  Date Date Run No. 4 Run No. 5 Tool Model Tool SN Tool SN From From From To To Recorded By Truck No Operation Check Calibration Check Calibration Check Calibration Check Calibration Check Calibration Check Calibration Check Time Logged Time Logged	Tool Model	
To 1180 FT. To Recorded By A. OLSON Recorded By Truck No 200 Truck No Operation Check 5-14-18 Operation Check Calibration Check 5-14-18 Calibration Check Time Logged 11:00 A.M. Time Logged  Date Date Run No. 4 Run No. 5 Tool Model Tool SN Tool SN From From From From From From From To Recorded By Truck No Operation Check Operation Check Calibration Check Calibration Check Calibration Check Calibration Check Time Logged	Tool SN	
Recorded By A. OLSON Recorded By Truck No 200 Truck No Operation Check 5-14-18 Operation Check Calibration Check 5-14-18 Calibration Check Time Logged 11:00 A.M. Time Logged  Date Run No. 4 Run No. 5 Tool Model Tool SN Tool SN From From To To Recorded By Truck No Operation Check Calibration Check Calibration Check Calibration Check Calibration Check Time Logged  Time Logged	From	
Truck No  Operation Check 5-14-18  Calibration Check 5-14-18  Time Logged 11:00 A.M.  Date  Run No. 4  Tool Model  Tool SN  From  To  Recorded By  Truck No  Operation Check  Calibration Check  Truck No  Operation Check  Calibration Check  Calibration Check  Calibration Check  Calibration Check  Time Logged	То	
Operation Check Calibration Check Time Logged  Date Run No. Tool Model Tool SN From From To Recorded By Truck No Operation Check Calibration Check Time Logged  Operation Check Calibration Check Calibration Check Calibration Check Time Logged  Operation Check Calibration Check Time Logged  Operation Check Calibration Check Time Logged	Recorded By	
Calibration Check Time Logged  11:00 A.M.  Time Logged  Date Run No. 4 Run No. 5 Tool Model Tool SN From From To Recorded By Truck No Operation Check Calibration Check Calibration Check Time Logged  Calibration Check Time Logged	Truck No	
Time Logged  Date Run No. 4 Run No. 5 Tool Model Tool SN Tool SN From From To To Recorded By Truck No Operation Check Calibration Check Time Logged  Time Logged  Time Logged	Operation Check	
Date Run No. 4 Run No. 5 Tool Model Tool SN Tool SN From From To To Recorded By Recorded By Truck No Operation Check Calibration Check Time Logged Tool SN Calibration Check Time Logged  Date Run No. 5 Tool Model Tool Model Tool SN From To To Recorded By Calibration Check Time Logged	Calibration Check	
Run No. 4 Run No. 5 Tool Model Tool Model Tool SN Tool SN From From To To Recorded By Recorded By Truck No Truck No Operation Check Operation Check Calibration Check Time Logged Time Logged	Time Logged	
Run No. 4 Run No. 5 Tool Model Tool Model Tool SN Tool SN From From To To Recorded By Recorded By Truck No Truck No Operation Check Operation Check Calibration Check Calibration Check Time Logged Time Logged	Date	
Tool Model Tool SN Tool SN From From To Recorded By Truck No Operation Check Calibration Check Time Logged Tool SN From Toc Recorded By Recorded By Truck No Operation Check Calibration Check Time Logged		
Tool SN         Tool SN           From         From           To         To           Recorded By         Recorded By           Truck No         Truck No           Operation Check         Operation Check           Calibration Check         Calibration Check           Time Logged         Time Logged	Run No.	6
From To To Recorded By Truck No Operation Check Calibration Check Time Logged From To Recorded By Truck No Operation Check Calibration Check Time Logged	Tool Model	
To To Recorded By Recorded By Truck No Truck No Operation Check Calibration Check Calibration Check Time Logged Time Logged	Tool SN	
Recorded By Truck No Operation Check Calibration Check Time Logged Truck No Truck No Operation Check Calibration Check Time Logged	From	
Truck No  Operation Check Calibration Check Time Logged  Truck No Operation Check Calibration Check Time Logged	To	
Operation Check Calibration Check Time Logged  Calibration Check Time Logged	Recorded By	
Calibration Check Time Logged Time Logged	Truck No	
Time Logged Time Logged	Operation Check	
	Calibration Check	
Additional Comments:	Time Logged	
Caliper Arms Used: N/A Calibration Points: N	N/A	=
E-Log Calibration Range: N/A Calibration Points: N	N/A	
		-

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Presure Rating: 200 bar (2900 psi)

Two impeller cage sizes: 3" and 4"

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Measures both upflow and downflow.

Minimum Flow Rate: 3-5 gpm Maximum Flow Rate: 5000 gpm





### 1.57" or 40 mm Diameter (Cage dependent)



Company FLORENCE COPPER

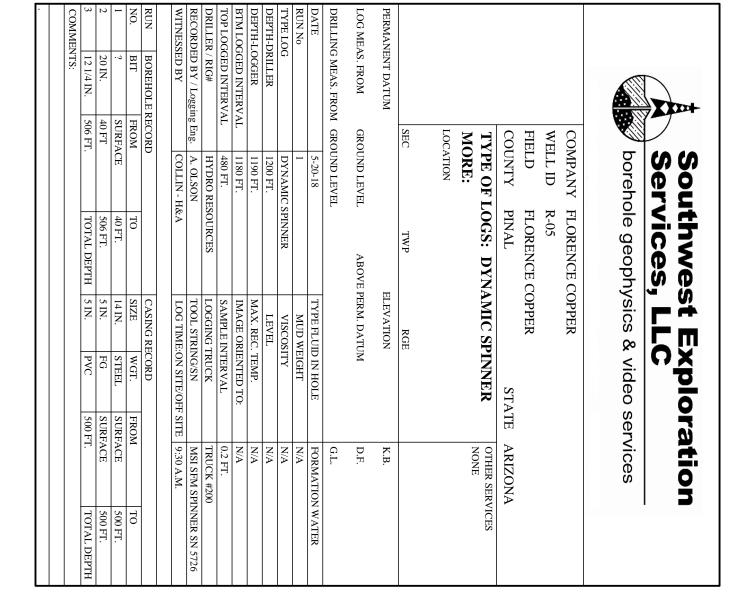
Well R-03

Field FLORENCE COPPER

County PINAL State ARIZONA

**Preliminary** 

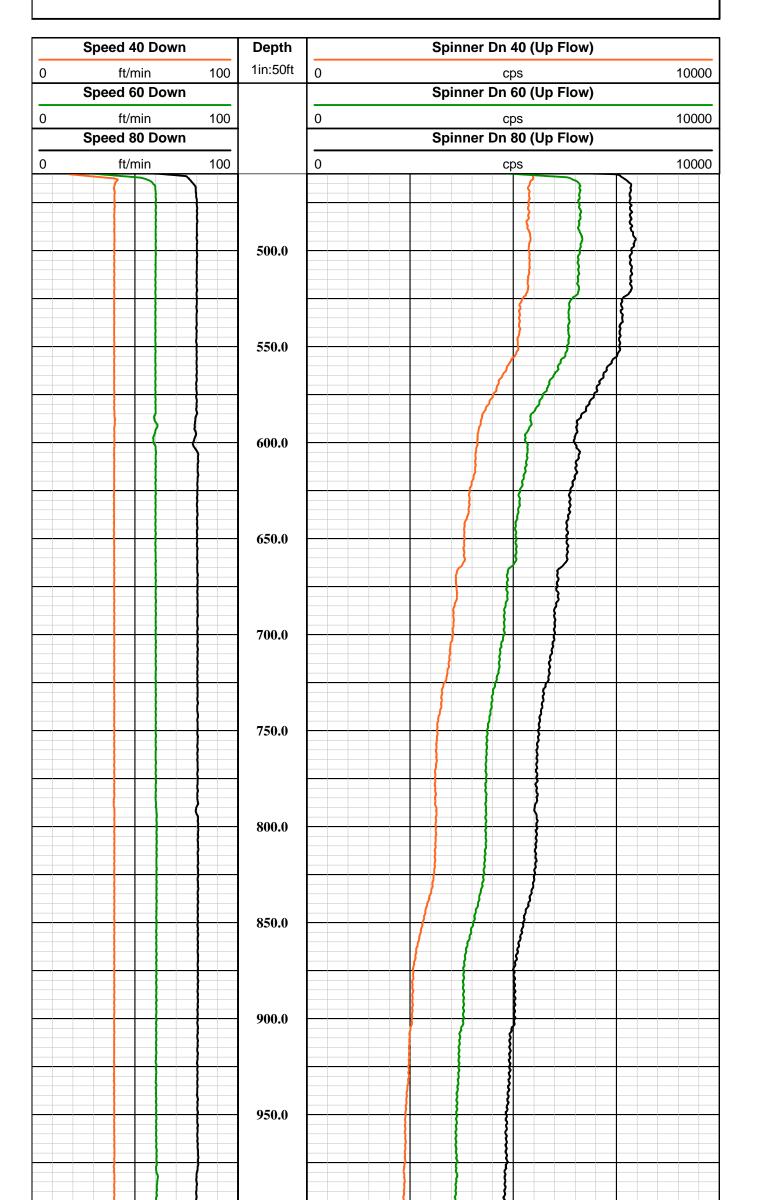
**Dynamic Spinner Summary** 

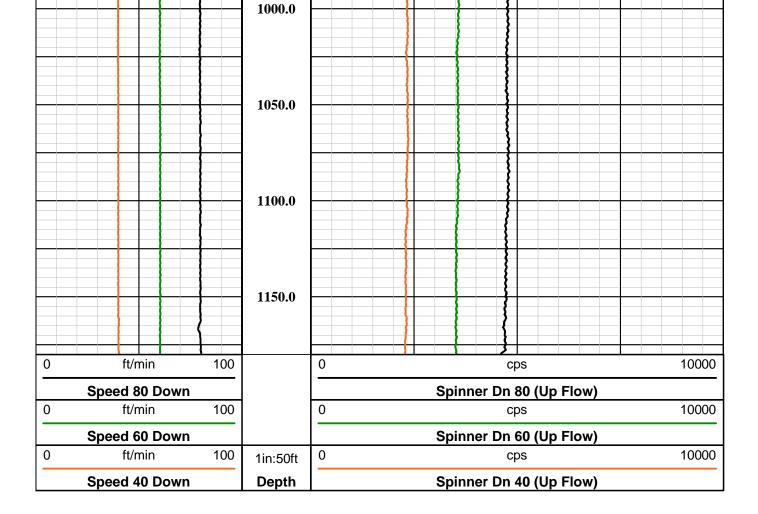


Tool Summary:						
Date	5-20-18	Date		Date		
Run No.	1	Run No.	2	Run No.	3	
Tool Model	MSI SFM SPINNER	Tool Model		Tool Model		
Tool SN	5726	Tool SN		Tool SN		
From	480 FT.	From		From		
То	1180 FT.	То		То		
Recorded By	A. OLSON	Recorded By		Recorded By		
Truck No	200	Truck No		Truck No		
Operation Check	5-14-18	Operation Check		Operation Check		
Calibration Check	5-14-18	Calibration Check		Calibration Check		
Time Logged	11:00 A.M.	Time Logged		Time Logged		
Date		Date		Date		
Run No.	4	Run No.	5	Run No.	6	
Tool Model		Tool Model		Tool Model		
Tool SN		Tool SN		Tool SN		
From		From		From		
То		То		То		
Recorded By		Recorded By		Recorded By		
Truck No		Truck No		Truck No		
Operation Check		Operation Check		Operation Check		
Calibration Check		Calibration Check		Calibration Check		
	Time Logged Time Logged Time Logged					
Additional Comments:						
Caliper Arms Used: N/A Calibration Points: N/A						
E-Log Calibration	Range: N/A	Calibr	ation Points:	N/A	-	

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Measures both upflow and downflow.

Minimum Flow Rate: 3-5 gpm Maximum Flow Rate: 5000 gpm





Company FLORENCE COPPER

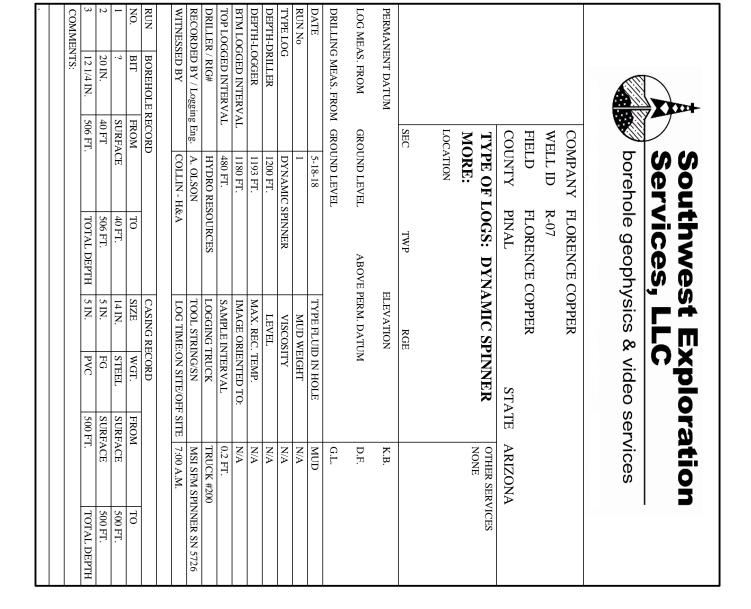
Well R-0

Field FLORENCE COPPER

County PINAL State ARIZONA

**Preliminary** 

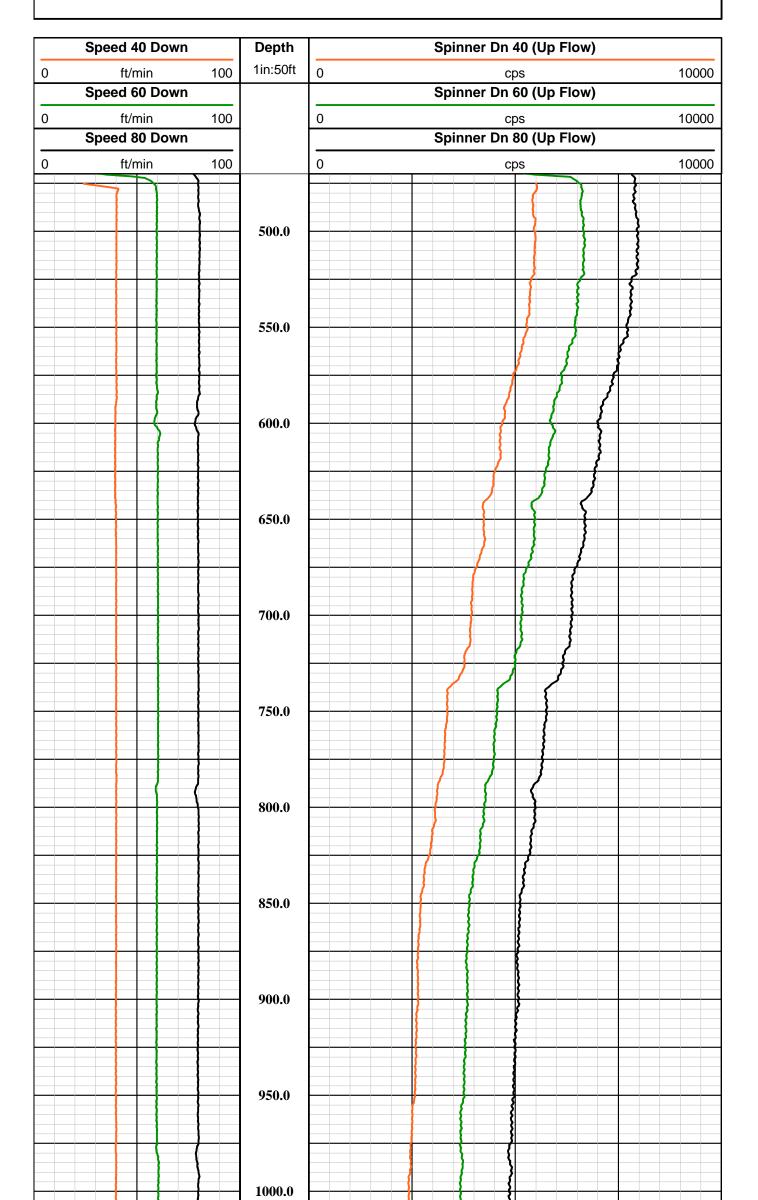
**Dynamic Spinner Summary** 

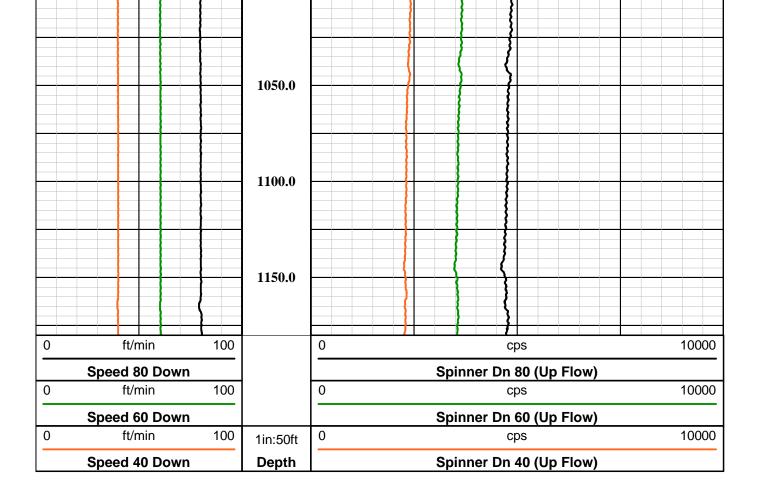


Date	5-18-18	Date		Date	
Run No.	1	Run No.	2	Run No.	3
Tool Model	MSI SFM SPINNER	Tool Model		Tool Model	
Tool SN	5726	Tool SN		Tool SN	
From	480 FT.	From		From	
То	1180 FT.	То		То	
Recorded By	A. OLSON	Recorded By		Recorded By	
Truck No	200	Truck No		Truck No	
Operation Check	5-14-18	Operation Check		Operation Check	
<b>Calibration Check</b>	5-14-18	Calibration Check		Calibration Check	
Time Logged	10:30 A.M.	Time Logged		Time Logged	
Date		Date		Date	
Run No.	4	Run No.	5	Run No.	6
Tool Model	4	Tool Model	<u> </u>	Tool Model	6
Tool SN		Tool SN		Tool SN	
From		From		From	
To		To		To	
Recorded By		Recorded By		Recorded By	
Truck No		Truck No		Truck No	
Operation Check		Operation Check		Operation Check	
Calibration Check		Calibration Check		Calibration Check	
Time Logged		Time Logged		Time Logged	
Additional Comm	nents:				
Caliper Arms Use	d: N/A	Calibr	ation Points:	N/A	-
	E-Log Calibration Range: N/A Calibration Points: N/A				

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Measures both upflow and downflow.

Minimum Flow Rate: 3-5 gpm Maximum Flow Rate: 5000 gpm



1.57" or 40 mm Diameter (Cage dependent)



borehole geophysics & video services

Company FLORENCE COPPER

Well R-07

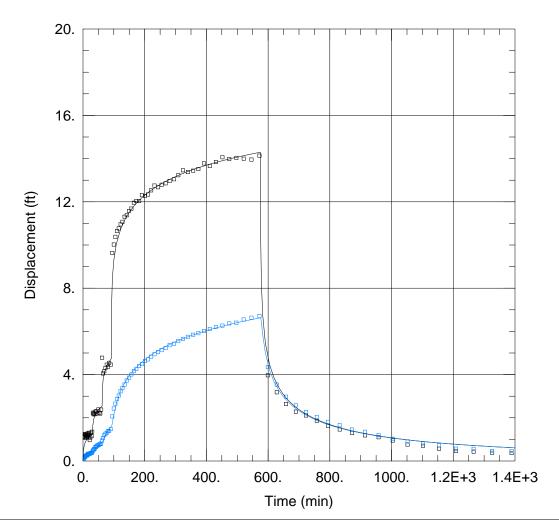
FLORENCE COPPER Field

County PINAL State ARIZONA

**Preliminary Dynamic Spinner Summary** 

## APPENDIX C

**AQTESOLV** Results



Data Set: C:\...\R-01\_O-01\_draft.aqt

Date: 07/23/18 Time: 04:15:36

## AQUIFER DATA

Saturated Thickness: 841. ft Aquitard Thickness (b'): 1. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

#### **WELL DATA**

Pumping Wells		
Well Name	X (ft)	Y (ft)
R-01	847692.93	746271.15

Well Name	X (ft)	Y (ft)
□ R-01	847692.93	746271.15
□ O-01	847692.93	746200.45

**Observation Wells** 

### **SOLUTION**

Aquifer Model: Leaky

 $\begin{array}{l} T &= \underline{406.5} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0007515} \text{ ft}^{-1} \\ \text{C} &= \underline{0.1318} \text{ min}^2/\text{ft}^5 \end{array}$ 

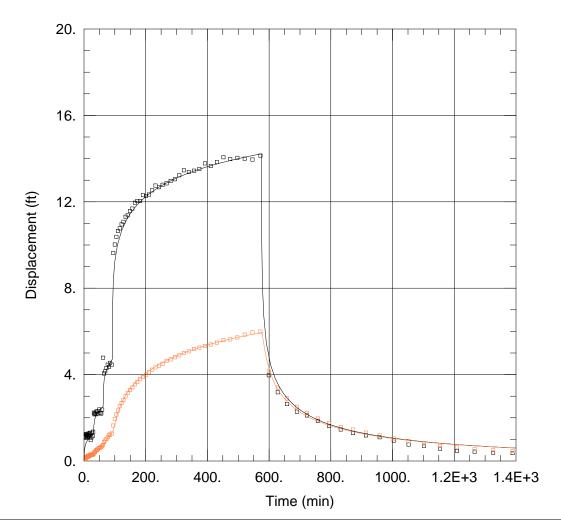
Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.0009847Sw = -3.648

 $P = \overline{1.747}$ 

 $s(t) = 0.2973Q + 0.1318Q^{1.747}$ 

 $\overline{W.E.} = 311.2\%$  (Q from last step)



Data Set: C:\...\R-01\_O-07\_draft.aqt

Date: 07/23/18 Time: 04:20:21

## AQUIFER DATA

Saturated Thickness: 841. ft Aquitard Thickness (b'): 1. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

#### **WELL DATA**

Pum	oing Wells	
	X (ft)	Y (ft)
	847692.93	746271.15

Observa	ation Wells	
Well Name	X (ft)	Y (ft)
□ R-01	847692.93	746271.15
□ O-07	847623.88	746270.61

#### **SOLUTION**

Aquifer Model: Leaky

Well Name R-01

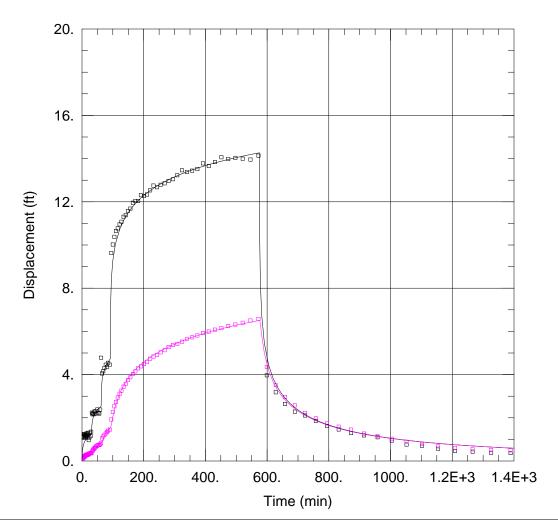
 $\begin{array}{ll} T &= \underline{410.9} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0009071} \text{ ft}^{-1} \\ C &= \underline{0.1318} \text{ min}^2/\text{ft}^5 \end{array}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.001363

Sw = -3.498 $P = \overline{1.747}$ 

 $s(t) = 0.2907Q + 0.1318Q^{1.747}$ W.E. = 298.9% (Q from last step)



Data Set: C:\...\R-01\_I-01\_draft.aqt

Date: 07/22/18 Time: 00:31:26

## AQUIFER DATA

Saturated Thickness: 841. ft Aquitard Thickness (b'): 1. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

#### **WELL DATA**

	Pumping wells	
Well Name	X (ft)	Y (ft)
R-01	847692.93	746271.15

Well Name	X (ft)	Y (ft)
□ R-01	847692.93	746271.15
□ I-01	847692.93	746200.45

**Observation Wells** 

### **SOLUTION**

Aquifer Model: Leaky

 $\begin{array}{ll} T &= \underline{407.1} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0008649} \text{ ft}^{-1} \\ C &= \underline{0.1318} \text{ min}^2/\text{ft}^5 \end{array}$ 

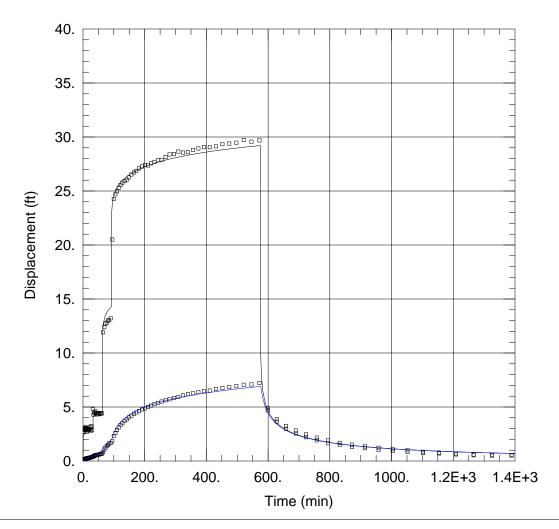
Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.001101

Sw = -3.598 $P = \overline{1.747}$ 

 $s(t) = \underline{0.2939}Q + \underline{0.1318}Q^{1.747}$ 

W.E. = 308.% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-03\R-03\_O-02\_draft.aqt

Date: 06/06/18 Time: 17:22:44

### **AQUIFER DATA**

Saturated Thickness: 824. ft Aquitard Thickness (b'): 1. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

#### **WELL DATA**

**Pumping Wells** 

**Observation Wells** 

Well Name	X (ft)	Y (ft)
R-03	847834.33	746129.75

Well Name	X (ft)	Y (ft)
□ R-03	847834.33	746129.75
□ O-02	847834.34	746200.46

#### **SOLUTION**

Aquifer Model: Leaky

 $T = 433.9 \text{ ft}^2/\text{day}$ 

 $1/B = \frac{2.381E-5}{2.381E-5} \text{ ft}^{-1}$ C =  $\frac{0.3359 \text{ min}^2}{10.3359 \text{ min}^2}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

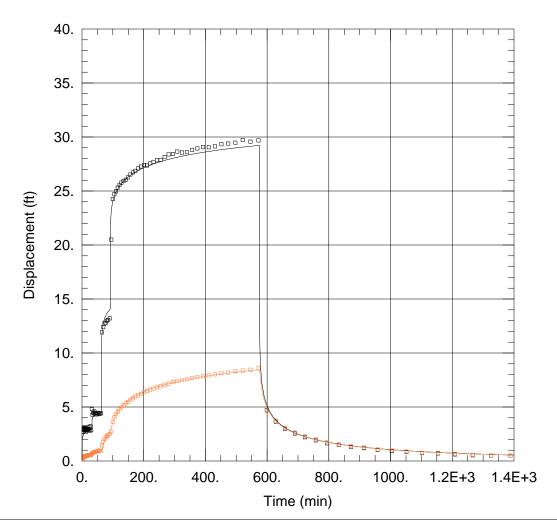
S = 0.0007787

Sw = -0.1943

P = 1.634

 $s(t) = 2.579Q + 0.3359Q^{1.634}$ 

W.E. = 75.33% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-03\R-03\_O-03\_draft.aqt

Date: 06/06/18 Time: 17:22:47

### **AQUIFER DATA**

Saturated Thickness: 824. ft Aquitard Thickness (b'): 1. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

#### **WELL DATA**

Pumping Wells	
X (ft) Y (ft)	

Well Name	X (ft)	Y (ft)
R-03	847834.33	746129.75

Well Name	X (ft)	Y (ft)
□ R-03	847834.33	746129.75
□ O-03	847831.43	746053.02

**Observation Wells** 

#### **SOLUTION**

Aquifer Model: Leaky

 $\begin{array}{ll} T &= \underline{363.5} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0007316} \text{ ft}^{-1} \\ \text{C} &= \underline{0.3359} \text{ min}^2/\text{ft}^5 \end{array}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

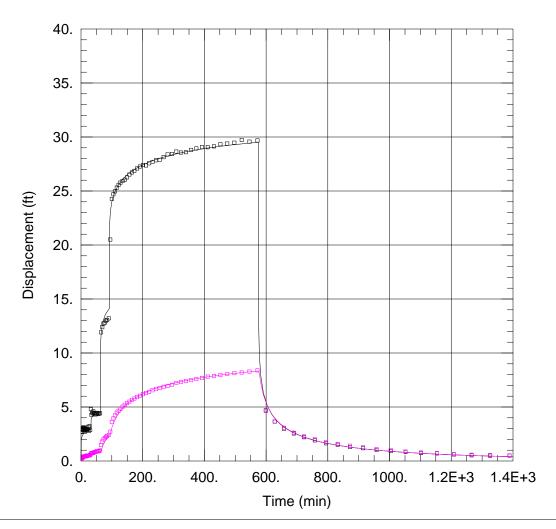
S = 0.0003426

Sw = -1.494

P = 1.634

 $s(t) = 2.327Q + 0.3359Q^{1.634}$ 

W.E. = 98.82% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-03\R-03\_I-02\_draft.aqt

Date: 06/06/18 Time: 17:22:38

# **AQUIFER DATA**

Saturated Thickness: 824. ft Aquitard Thickness (b'): 1. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

# **WELL DATA**

**Pumping Wells** Y (ft) X (ft) 847834.33 746129.75

Well Name	X (ft)	Y (ft)
□ R-03	847834.33	746129.75
n L-02	8/7763 63	7/6120 75

**Observation Wells** 

# SOLUTION

Aquifer Model: Leaky

Well Name

R-03

 $T = 330.9 \text{ ft}^2/\text{day}$ 

 $1/B = \frac{0.001638}{0.03359 \text{ min}^2/\text{ft}^5}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

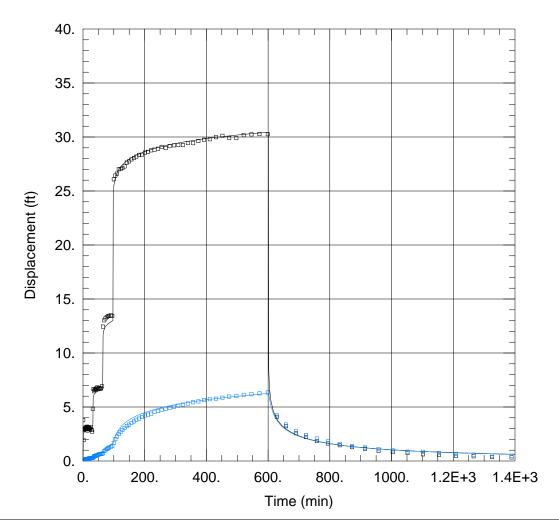
S = 0.0007787

Sw = -1.494

P = 1.634

 $s(t) = 2.181Q + 0.3359Q^{1.634}$ 

W.E. = 101.7% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-05\R-05\_O-04\_draft.aqt

Date: 06/06/18 Time: 12:50:09

# AQUIFER DATA

Saturated Thickness: 824. ft Aquitard Thickness (b'): 1. ft

Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Fullpling Wells		
Well Name	X (ft)	Y (ft)
R-05	847692.91	745988.33

Dumping Walls

Well Name	X (ft)	Y (ft)
□ R-05	847692.91	745988.33
□ O-04	847622.22	745987.44

**Observation Wells** 

# **SOLUTION**

Aquifer Model: Leaky

R-05

 $\begin{array}{l} T &= \underline{522.4} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0002693} \text{ ft}^{-1} \\ \text{C} &= \underline{0.1307} \text{ min}^2/\text{ft}^5 \end{array}$ 

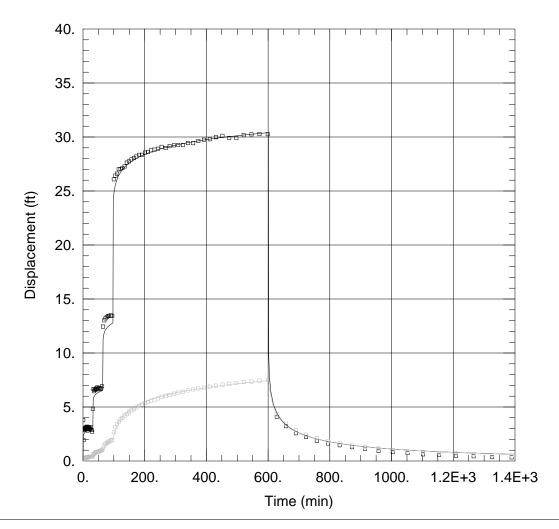
Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.0007787Sw = 2.338

P = 1.5

 $s(t) = 3.538Q + 0.1307Q^{1.5}$ 

W.E. = 65.26% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-05\R-05\_I-03\_draft.aqt

Date: 06/06/18 Time: 12:50:43

# AQUIFER DATA

Saturated Thickness: 824. ft Aquitard Thickness (b'): 1. ft

Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pumping Wells

**Observation Wells** 

i diliping wollo		
Well Name	X (ft)	Y (ft)
R-05	847692.91	745988.33

Well Name	X (ft)	Y (ft)
□ R-05	847692.91	745988.33
- I-03	847692.92	746059.04

# **SOLUTION**

Aquifer Model: Leaky

 $\begin{array}{ll} T &= \underline{446.7} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0005854} \text{ ft}^{-1} \\ C &= \underline{0.1307} \text{ min}^2/\text{ft}^5 \end{array}$ 

Step Test Model: Jacob-Rorabaugh

Time (t) = 1. min Rate (Q) in cu. ft/min

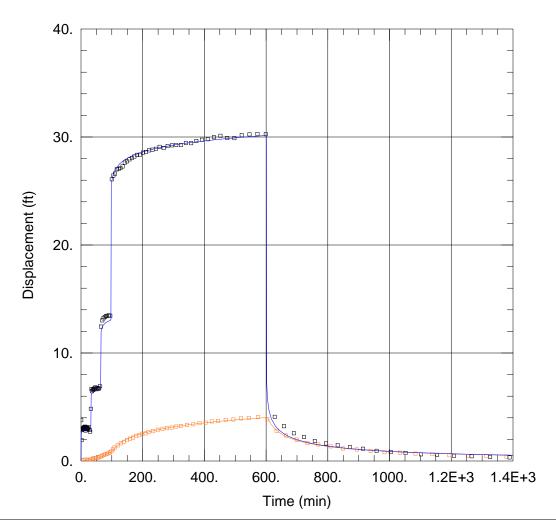
Solution Method: Hantush-Jacob

S = 0.0005967

Sw = 0.9383P = 1.5

 $s(t) = 3.3Q + 0.1307Q^{1.5}$ 

W.E. = 78.04% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-05\R-05\_M60-O\_draft.aqt

Date: 06/06/18 Time: 12:50:05

# AQUIFER DATA

Saturated Thickness: 824. ft Aquitard Thickness (b'): 1. ft

Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b"): 1. ft

# **WELL DATA**

**Pumping Wells** 

**Observation Wells** 

Well Name	X (ft)	Y (ft)
R-05	847692.91	745988.33

Well Name	X (ft)	Y (ft)
□ M60-O	847599	745904
□ R-05	847692.91	745988.33

# **SOLUTION**

Aquifer Model: Leaky

 $T = \frac{614.8}{1/B} \text{ ft}^2/\text{day}$   $1/B = \frac{0.0001664}{0.0001664} \text{ ft}^{-1}$ 

 $C = \frac{0.1307 \text{ min}^2}{10.1307 \text{ min}^2}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

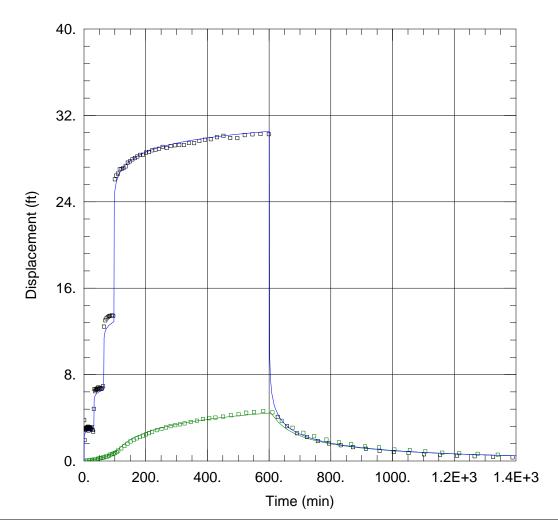
S = 0.0007947

Sw = 3.838

P = 1.5

 $s(t) = -0.3115Q + 0.1307Q^{1.5}$ 

W.E. = -1.188E+7% (Q from last step)



Data Set: C:\...\R-05\_MW-01-O\_draft.aqt

Date: 06/06/18 Time: 12:50:07

# AQUIFER DATA

Saturated Thickness: 824. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b'): 1. ft Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pumping Wells		Observation Wells			
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
R-05	847692.91	745988.33	□ MW-01-O	847846.92	746356.72
			□ R-05	847692.91	745988.33

# SOLUTION

Aquifer Model: Leaky

 $\begin{array}{ll} T &= \underline{425.9} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0003962} \text{ ft}^{-1} \\ \text{C} &= \underline{0.1307} \text{ min}^2/\text{ft}^5 \end{array}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

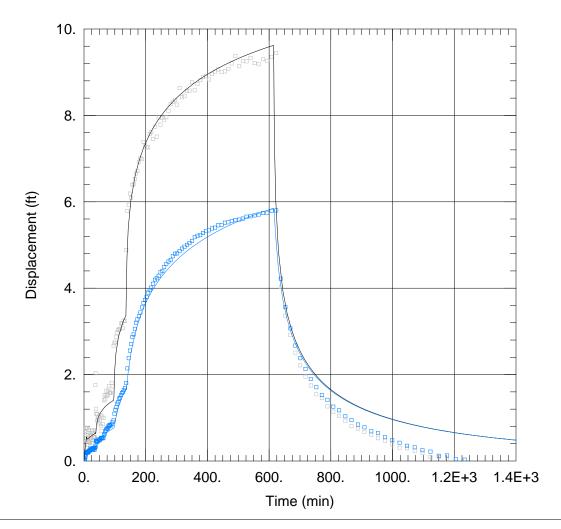
S = 0.0001016

Sw = -0.06169

P = 1.5

 $s(t) = -0.2762Q + 0.1307Q^{1.5}$ 

W.E. = -687.6% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-07\_O-05\_draft.aqt

Date: 06/06/18 Time: 10:44:23

# AQUIFER DATA

Saturated Thickness: 824. ft
Aquitard Thickness (b'): 1. ft

Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b'): 1. ft

# **WELL DATA**

Pumping Wells		Observation Wells			
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)
R-07	847551.51	746129.73	□ R-07	847551.51	746129.73
			□ O-05	847692.91	745988.33

# **SOLUTION**

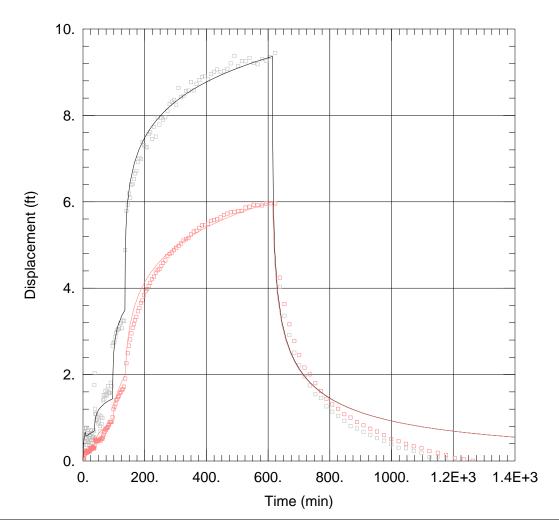
Aquifer Model: Leaky

 $\begin{array}{ll} T &= \underline{407.1} \text{ ft}^2 / \text{day} \\ 1 / B &= \underline{0.000438} \text{ ft}^{-1} \\ C &= \overline{0.087} \text{ min}^2 / \text{ft}^5 \end{array}$ 

Step Test Model: <u>Jacob-Rorabaugh</u> Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.0001307  $Sw = \frac{-5.363}{1.639}$ P = 1.639

 $s(t) = -0.1975Q + 0.087Q^{1.639}$ W.E. = 5474.% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-07 \_O-06\_draft.aqt

Date: 06/06/18 Time: 10:44:04

# AQUIFER DATA

Saturated Thickness: <u>824.</u> ft Anisotropy Ratio (Kz/Kr): <u>1.</u> Aquitard Thickness (b'): 1. ft Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pumping wells		
Well Name	X (ft)	Y (ft)
R-07	847551.51	746129.73

Dunas is a Malla

Well Name	X (ft)	Y (ft)
□ R-07	847551.51	746129.73
□ O-06	847551.52	746200.44

**Observation Wells** 

# **SOLUTION**

Aquifer Model: Leaky

 $T = 544.3 \text{ ft}^2/\text{day}$ 

 $1/B = \frac{2.381E-5}{2.05} ft^{-1}$ 

 $C = \frac{100 \cdot 10^{10}}{0.087 \text{ min}^2/\text{ft}^5}$ 

Step Test Model: <u>Jacob-Rorabaugh</u> Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

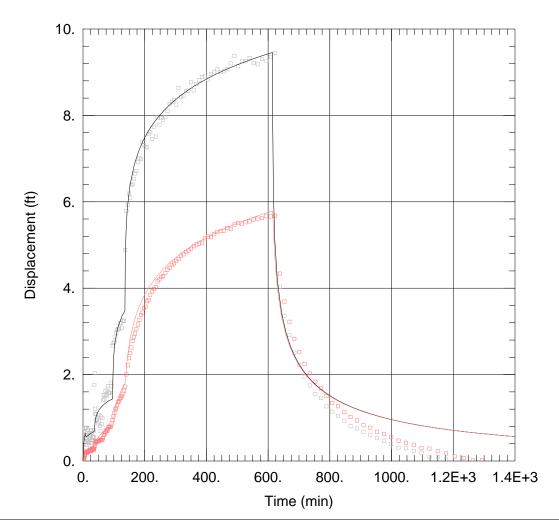
S = 0.0005

Sw = -4.315

P = 1.639

 $s(t) = 0.1263Q + 0.087Q^{1.639}$ 

W.E. = 517.7% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-07\_I-04\_draft.aqt

Date: 06/06/18 Time: 10:44:13

# AQUIFER DATA

Saturated Thickness: 824. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b'): 1. ft Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pumping wells		
Well Name	X (ft)	Y (ft)
R-07	847551.51	746129.73

Dunas is a Malla

Well Name	X (ft)	Y (ft)
□ R-07	847551.51	746129.73
□ I-04	847622.23	746129.75

**Observation Wells** 

# **SOLUTION**

Aquifer Model: Leaky

 $\begin{array}{l} T &= \underline{522.5} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0001888} \text{ ft}^{-1} \\ \text{C} &= \underline{0.087} \text{ min}^2/\text{ft}^5 \end{array}$ 

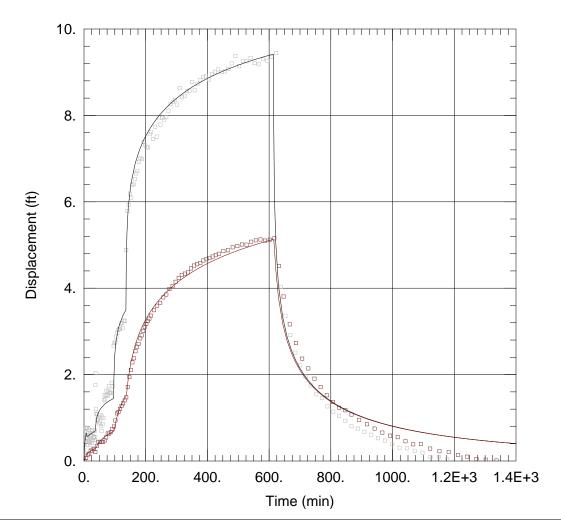
Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.0007522Sw = -4.215

P = 1.639

 $s(t) = 0.06785Q + 0.087Q^{1.639}$ 

W.E. = 604.9% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-07\_M57-O\_draft.aqt

Date: 06/06/18 Time: 10:44:16

# AQUIFER DATA

Saturated Thickness: 824. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b'): 1. ft Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pum	ping Wells		Observation Wells							
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)					
R-07	847551.51	746129.73	□ R-07	847551.51	746129.73					
			□ M57-O	847378	746249					

# **SOLUTION**

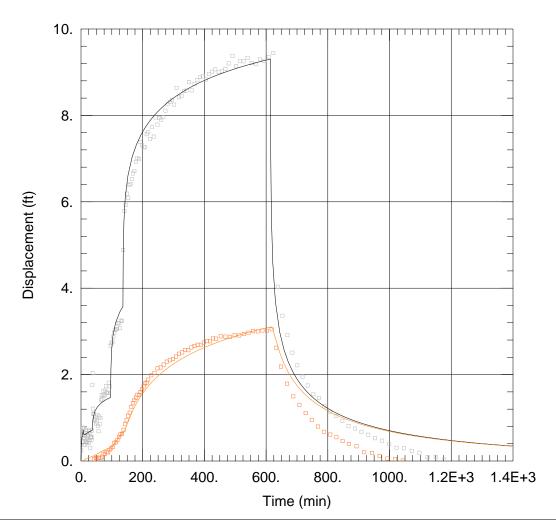
Aquifer Model: Leaky

 $\begin{array}{l} T &= \underline{482.1} \text{ ft}^2/\text{day} \\ 1/B &= \underline{0.0003795} \text{ ft}^{-1} \\ C &= \underline{0.087} \text{ min}^2/\text{ft}^5 \end{array}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.0001123Sw = -5.126P = 1.639

 $s(t) = \underline{0.0575}Q + \underline{0.087}Q^{1.639}$ W.E. = 813.7% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-07\_M60-O\_draft.aqt

Date: 06/06/18 Time: 10:44:18

# AQUIFER DATA

Saturated Thickness: 824. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b'): 1. ft Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pum	ping Wells		Observation Wells						
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)				
R-07	847551.51	746129.73	□ R-07	847551.51	746129.73				
			□ M60-O	847599	745904				

# SOLUTION

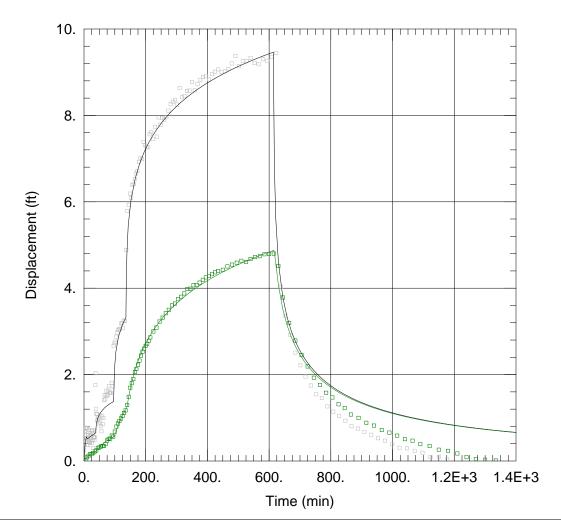
Aquifer Model: Leaky

 $\begin{array}{l} T &= \underline{543.9} \text{ ft}^2/\text{day} \\ 1/\text{B} &= \underline{0.0007201} \text{ ft}^{-1} \\ C &= \underline{0.087} \text{ min}^2/\text{ft}^5 \end{array}$ 

Step Test Model: Jacob-Rorabaugh Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 0.000423Sw = -4.315P = 1.639

 $s(t) = \underline{0.1677}Q + \underline{0.087}Q^{1.639}$ W.E. = 476.5% (Q from last step)



Data Set: C:\Users\cgardner\Documents\Florence Copper Project\AQTESOLV\R-07\_MW-01-O\_draft.aqt

Date: 06/06/18 Time: 10:44:20

# AQUIFER DATA

Saturated Thickness: 824. ft Anisotropy Ratio (Kz/Kr): 1. Aquitard Thickness (b'): 1. ft Aquitard Thickness (b"): 1. ft

# **WELL DATA**

Pum	ping Wells		Observation Wells							
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)					
R-07	847551.51	746129.73	□ R-07	847551.51	746129.73					
			□ MW-01-O	847846.92	746356.72					

# SOLUTION

Aquifer Model: Leaky

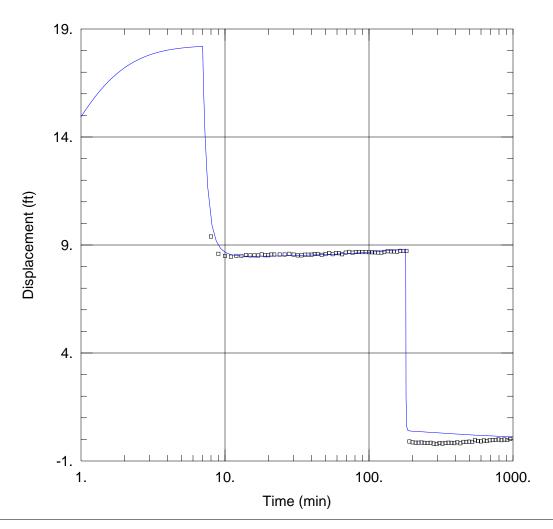
 $T = \frac{452.6}{2.334}$  ft<sup>2</sup>/day

 $1/B = \frac{2.381E-5}{0.087 \text{ min}^2/\text{ft}^5}$ 

Step Test Model: <u>Jacob-Rorabaugh</u> Time (t) = 1. min Rate (Q) in cu. ft/min Solution Method: Hantush-Jacob

S = 6.508E-5 SW = -5.565P = 1.639

 $s(t) = -0.06722Q + 0.087Q^{1.639}$ W.E. = 1512.7% (Q from last step)



Data Set: C:\...\M55-UBF\_single well\_draft.aqt

Date: 07/23/18 Time: 08:51:03

# AQUIFER DATA

Saturated Thickness: 39. ft Anisotropy Ratio (Kz/Kr): 1.

# WELL DATA

	Pumping Wells		Observation Wells						
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)				
M55-UBF	847541	746281	□ M55-UBF	847541	746281				
•									

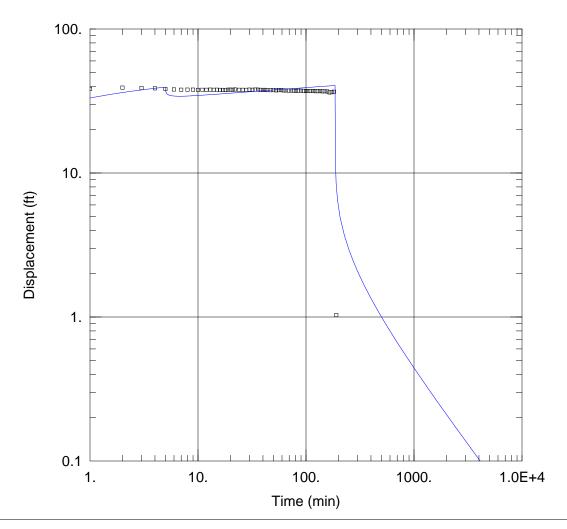
# SOLUTION

Aquifer Model: Unconfined

 $T = 482.5 \text{ ft}^2/\text{day}$ 

Sy = 0.13 Sw = 0.r(c) = 0.21 ft Solution Method: Moench

 $S = \underbrace{0.001161}_{0.0001273}$   $r(w) = \underbrace{0.44}_{1.0E+30} \text{ min}^{-1}$ 



Data Set: C:\...\M56-LBF\_single well\_draft.aqt

Date: 07/23/18 Time: 08:51:21

# WELL DATA

Pum	ping Wells		Observation Wells						
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)				
M56-LBF	0	0	□ M56-LBF	0	0				

# SOLUTION

Aquifer Model: Confined

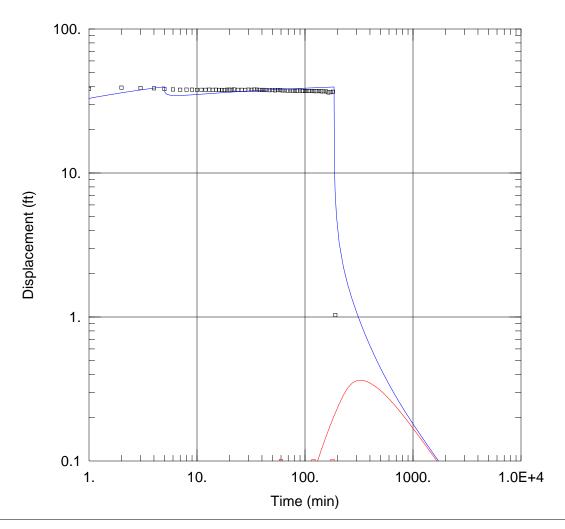
Solution Method: Theis

 $T = 107.2 \text{ ft}^2/\text{day}$ 

S = 0.003208

 $Kz/Kr = \overline{1}$ .

b =  $\overline{50. \text{ ft}}$ 



Data Set: C:\...\M56-LBF\_single well\_draft\_jc.aqt

Date: 07/23/18 Time: 09:27:25

# WELL DATA

Pum	ping Wells		Observation Wells						
Well Name	X (ft)	Y (ft)	Well Name	X (ft)	Y (ft)				
M56-LBF	0	0	□ M56-LBF	0	0				
			□ O-06	109	0				

# SOLUTION

Aquifer Model: Confined

T = 264. ft<sup>2</sup>/day

 $Kz/Kr = \frac{20.1}{0.1}$ 

Solution Method: Theis

S = 0.003208

b =  $\overline{100. \text{ ft}}$ 

# **EXHIBIT D-5**

Memorandum: Summary of Bulk Conductivity Monitoring Results, First Quarter 2019, Production Test Facility (prepared by Haley & Aldrich, Inc.)





### **MEMORANDUM**

26 April 2019 File No. 132473-003

TO: Florence Copper Inc.

Mr. Dan Johnson V.P., General Manager

C: Florence Copper Inc.

Mr. Ian Ream, Senior Hydrogeologist

FROM: Haley & Aldrich, Inc.

Mark Nicholls, R.G.

SUBJECT: Summary of Bulk Conductivity Monitoring Results, First Quarter 2019

**Production Test Facility** 

Florence Copper, Florence, Arizona

Haley & Aldrich, Inc. (Haley & Aldrich) has conducted statistical analysis of bulk electrical conductivity data collected by HydroGeophysics, Inc. at the Production Test Facility (PTF) located in Florence, Arizona, in accordance with Temporary Aquifer Protection Permit (APP) No. 106360 and the Underground Injection Control (UIC) Permit No R9UIC-AZ3-FR11-1. The procedures used to complete the analysis were described in the document titled *Procedures for Determining Bulk Electrical Conductivity Alert Levels* (Haley & Aldrich, 2018)<sup>1</sup>. The alert levels (ALs) for bulk electrical conductivity were approved in the letter issued by the U.S. Environmental Protection Agency dated 14 December 2018 and were adopted into the APP issued by the Arizona Department of Environmental Quality on 5 December 2018.

### **Alert Levels**

To ensure that In-Situ Copper Recovery fluids do not enter the lower basin-fill unit from the bedrock oxide unit, the three upper horizons (1 through 3) are monitored. The following ALs were established for these horizons:

Electrode Pair Horizon	Proposed Alert Level (ohm-meters)
Horizon 1	9.93
Horizon 2	10.12
Horizon 3	10.33

-

<sup>&</sup>lt;sup>1</sup> Haley & Aldrich, Inc., 2018. *Procedures for Determining Bulk Electrical Conductivity Alert Levels, Production Test Facility, Florence Copper Project*. August.

Florence Copper, Inc. 26 April 2019 Page 2

The ALs represent minimum values, if the measured apparent resistivity in one of these horizons is *lower* than the established AL on three adjacent or intersecting current paths, this constitutes an exceedance.

# **First Quarter 2019 Monitoring Results**

First quarter (Q1) 2019 includes 13 weekly monitoring events for bulk electrical conductivity between 3 January and 28 March. No AL exceedances occurred during the monitoring period.

One current path in the uppermost horizon yielded a conductivity value that was below the AL for one monitoring event. The value could not be reproduced during subsequent monitoring and is therefore attributed to instrument drift or electronic noise, and is considered to be an outlier. The low value occurred in Horizon 1, 40 feet above the lower basin fill unit/oxide contact, on 6 March 2019, between sending well O-05 and receiving well O-06. The recorded exceedance value was 9.91 ohm-meters ( $\Omega$ -m). This value is 0.02  $\Omega$ -m below the established 9.93  $\Omega$ -m alert level. Linear contour maps for the monitoring period detail these results (Figures 1 through 13).

# **Data Summary**

Tables 1 through 3 list the apparent resistivity results over this monitoring period for Horizons 1 through 3, respectively.

Relative to the baseline dataset, one outlier was detected on these monitoring dates (defined as values over 4 times the interquartile range outside the range around the data median). However, the grouped data from each horizon fall within the range of the baseline dataset (Attachment A).

Attachment B shows the data from each horizon over time, during the baseline period, and monitoring both before and after the PTF became operational. The data collected during Q1 is within the established tolerance limits.



#### **Enclosures:**

- Table 1 Bulk Electrical Conductivity Monitoring Results, Horizon 1 (40 Feet Above LBFU/Oxide Contact
- Table 2 Bulk Electrical Conductivity Monitoring Results, Horizon 2 (20 Feet Above LBFU/Oxide Contact
- Table 3 Bulk Electrical Conductivity Monitoring Results, Horizon 3 (at LBFU/Oxide Contact)
- Figure 1 Baseline Apparent Resistivity of Electrode Pairs by Horizon 01/03/2019, Production Test Facility
- Figure 2 Baseline Apparent Resistivity of Electrode Pairs by Horizon 01/11/2019, Production Test Facility
- Figure 3 Baseline Apparent Resistivity of Electrode Pairs by Horizon 01/17/2019, Production Test Facility
- Figure 4 Baseline Apparent Resistivity of Electrode Pairs by Horizon 01/24/2019, Production Test Facility
- Figure 5 Baseline Apparent Resistivity of Electrode Pairs by Horizon 01/31/2019, Production Test Facility
- Figure 6 Baseline Apparent Resistivity of Electrode Pairs by Horizon 02/08/2019, Production Test Facility
- Figure 7 Baseline Apparent Resistivity of Electrode Pairs by Horizon 02/14/2019, Production Test Facility
- Figure 8 Baseline Apparent Resistivity of Electrode Pairs by Horizon 02/21/2019, Production Test Facility
- Figure 9 Baseline Apparent Resistivity of Electrode Pairs by Horizon 02/28/2019, Production Test Facility
- Figure 10 Baseline Apparent Resistivity of Electrode Pairs by Horizon 03/06/2019, Production Test Facility
- Figure 11 Baseline Apparent Resistivity of Electrode Pairs by Horizon 03/14/2019, Production Test Facility
- Figure 12 Baseline Apparent Resistivity of Electrode Pairs by Horizon 03/21/2019, Production Test Facility
- Figure 13 Baseline Apparent Resistivity of Electrode Pairs by Horizon 03/28/2019, Production Test Facility
- Attachment A Box Diagrams for First Quarter Monitoring Data
- Attachment B Summary Plot of Bulk Electrical Conductivity

G:\Projects\Florence Copper\132473 Florence Groundwater Permitting\Deliverables\2019-Q1 Bulk EC PTF Reporting\2019\_0426\_Bulk EC Summary Q12019\_F.docx





TABLE 1
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 1 (40 FEET ABOVE LBFU/OXIDE CONTACT)

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Electrode 1	Electrode 2	Conding Woll	Bassining Wall						Appa	rent Resistivity	(Ω-m)					
Electrode 1	Electrode 2	Sending Well	Receiving Well	1/3/2019	1/11/2019	1/17/2019	1/24/2019	1/31/2019	2/8/2019	2/14/2019	2/21/2019	2/28/2019	3/6/2019	3/14/2019	3/21/2019	3/28/2019
B-01-BC-01	B-02-BC-01	0-01	O-02	13.02	12.89	12.92	12.93	12.93	12.91	12.89	12.92	12.85	12.85	12.83	12.85	12.87
B-01-BC-01	B-03-BC1-02	0-01	O-03	11.72	11.45	11.45	11.58	11.58	11.45	11.44	11.47	11.39	11.34	11.37	11.37	11.40
B-01-BC-01	B-04-BC-01	0-01	O-04	13.85	13.53	13.49	13.83	13.83	13.52	13.52	13.54	13.42	13.34	13.41	13.44	13.45
B-01-BC-01	B-05-BC-01	0-01	O-05	12.75	12.46	12.44	12.52	12.52	12.43	12.45	12.46	12.37	12.23	12.33	12.38	12.39
B-01-BC-01	B-06-BC-01	0-01	O-06	12.16	11.93	11.92	11.90	11.90	11.93	11.93	11.92	11.87	11.78	11.81	11.86	11.87
B-01-BC-01	B-07-BC1-02	0-01	O-07	12.06	11.89	11.88	11.84	11.84	11.90	11.90	11.90	11.86	11.82	11.83	11.85	11.86
B-02-BC-01	B-03-BC1-02	O-02	O-03	10.75	10.59	10.58	10.70	10.70	10.57	10.58	10.58	10.52	10.49	10.53	10.52	10.53
B-02-BC-01	B-04-BC-01	O-02	O-04	14.55	14.21	14.20	14.41	14.41	14.19	14.21	14.21	14.11	14.03	14.09	14.13	14.13
B-02-BC-01	B-05-BC-01	O-02	O-05	14.06	13.74	13.74	13.89	13.89	13.74	13.73	13.77	13.66	13.49	13.63	13.65	13.68
B-02-BC-01	B-06-BC-01	O-02	O-06	14.07	13.74	13.74	13.73	13.73	13.74	13.75	13.75	13.68	13.53	13.63	13.65	13.67
B-02-BC-01	B-07-BC1-02	O-02	O-07	12.82	12.57	12.57	12.71	12.71	12.58	12.58	12.58	12.53	12.46	12.47	12.50	12.52
B-03-BC1-02	B-04-BC-01	0-03	O-04	13.01	12.76	12.77	12.95	12.95	12.75	12.74	12.77	12.70	12.58	12.66	12.67	12.69
B-03-BC1-02	B-05-BC-01	0-03	O-05	13.49	13.21	13.19	13.20	13.20	13.19	13.19	13.21	13.13	12.96	13.08	13.11	13.12
B-03-BC1-02	B-06-BC-01	0-03	O-06	14.70	14.35	14.35	14.33	14.33	14.36	14.37	14.38	14.29	14.13	14.22	14.26	14.29
B-03-BC1-02	B-07-BC1-02	0-03	O-07	13.89	13.57	13.56	13.63	13.63	13.56	13.56	13.57	13.49	13.37	13.42	13.47	13.47
B-04-BC-01	B-05-BC-01	0-04	O-05	10.99	10.88	10.87	10.92	10.92	10.89	10.87	10.89	10.85	10.75	10.79	10.83	10.82
B-04-BC-01	B-06-BC-01	0-04	O-06	12.55	12.32	12.30	12.51	12.51	12.31	12.31	12.32	12.25	12.08	12.15	12.23	12.23
B-04-BC-01	B-07-BC1-02	0-04	O-07	13.26	12.98	12.94	13.00	13.00	12.97	12.97	12.98	12.89	12.75	12.81	12.86	12.90
B-05-BC-01	B-06-BC-01	O-05	O-06	10.28	10.12	10.12	10.07	10.07	10.13	10.12	10.13	10.08	9.91	9.97	10.05	10.06
B-05-BC-01	B-07-BC1-02	O-05	O-07	11.16	10.93	10.92	11.04	11.04	10.93	10.93	10.93	10.88	10.70	10.83	10.87	10.87
B-06-BC-01	B-07-BC1-02	O-06	O-07	10.20	10.09	10.10	10.19	10.19	10.10	10.11	10.10	10.07	10.01	10.05	10.06	10.07

# Notes

 $\Omega$ -m = ohm-meters

LBFU = lower basin-fill unit

Oxide = bedrock oxide unit

HALEY ALDRICH 2019\_Q1\_Florence\_bulkEC\_tables\_1-3.xlsx

TABLE 2
BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS
HORIZON 2 (20 FEET ABOVE LBFU/OXIDE CONTACT)

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Electrode 1	Electrode 2	Sending Well	Receiving Well						Appa	rent Resistivity	(Ω-m)					
Electrode 1	Electrode 2	Sending Weil	Receiving weii	1/3/2019	1/11/2019	1/17/2019	1/24/2019	1/31/2019	2/8/2019	2/14/2019	2/21/2019	2/28/2019	3/6/2019	3/14/2019	3/21/2019	3/28/2019
B-01-BC-02	B-02-BC-02	0-01	0-02	14.82	14.70	14.71	14.80	14.80	14.68	14.70	14.70	14.65	14.64	14.66	14.63	14.66
B-01-BC-02	B-03-BC1-04	0-01	O-03	11.79	11.53	11.53	11.58	11.58	11.51	11.53	11.53	11.45	11.43	11.46	11.46	11.48
B-01-BC-02	B-04-BC-02	0-01	0-04	13.71	13.38	13.40	13.23	13.23	13.38	13.38	13.40	13.29	13.20	13.31	13.29	13.33
B-01-BC-02	B-05-BC-02	0-01	O-05	12.57	12.29	12.27	12.52	12.52	12.28	12.29	12.28	12.19	12.07	12.17	12.21	12.24
B-01-BC-02	B-06-BC-02	0-01	0-06	12.01	11.79	11.78	11.91	11.91	11.78	11.78	11.79	11.72	11.63	11.66	11.71	11.73
B-01-BC-02	B-07-BC1-04	0-01	0-07	12.02	11.86	11.85	11.80	11.80	11.86	11.86	11.87	11.82	11.78	11.82	11.81	11.82
B-02-BC-02	B-03-BC1-04	0-02	O-03	11.45	11.27	11.26	11.26	11.26	11.24	11.25	11.26	11.20	11.16	11.21	11.19	11.20
B-02-BC-02	B-04-BC-02	0-02	0-04	14.62	14.27	14.26	14.41	14.41	14.27	14.26	14.27	14.17	14.07	14.15	14.17	14.20
B-02-BC-02	B-05-BC-02	0-02	O-05	14.07	13.76	13.75	13.89	13.89	13.75	13.77	13.77	13.66	13.53	13.60	13.69	13.71
B-02-BC-02	B-06-BC-02	0-02	0-06	14.09	13.76	13.75	13.74	13.74	13.76	13.77	13.78	13.68	13.56	13.65	13.69	13.70
B-02-BC-02	B-07-BC1-04	0-02	0-07	12.81	12.57	12.56	12.58	12.58	12.57	12.58	12.58	12.49	12.42	12.50	12.49	12.51
B-03-BC1-04	B-04-BC-02	0-03	0-04	13.00	12.74	12.74	12.95	12.95	12.73	12.74	12.75	12.68	12.58	12.66	12.65	12.66
B-03-BC1-04	B-05-BC-02	0-03	O-05	13.36	13.07	13.05	13.20	13.20	13.05	13.05	13.07	12.99	12.83	12.95	12.96	12.98
B-03-BC1-04	B-06-BC-02	0-03	0-06	14.55	14.21	14.22	14.33	14.33	14.22	14.23	14.23	14.13	14.00	14.11	14.11	14.13
B-03-BC1-04	B-07-BC1-04	0-03	0-07	13.63	13.31	13.31	13.60	13.60	13.30	13.30	13.32	13.23	13.13	13.16	13.23	13.23
B-04-BC-02	B-05-BC-02	0-04	O-05	11.34	11.23	11.23	11.30	11.30	11.24	11.22	11.24	11.20	11.12	11.13	11.17	11.19
B-04-BC-02	B-06-BC-02	0-04	0-06	12.55	12.30	12.30	12.51	12.51	12.30	12.29	12.30	12.24	12.07	12.12	12.21	12.22
B-04-BC-02	B-07-BC1-04	0-04	0-07	13.01	12.72	12.72	12.97	12.97	12.72	12.73	12.73	12.66	12.52	12.61	12.64	12.67
B-05-BC-02	B-06-BC-02	O-05	O-06	10.51	10.35	10.36	10.35	10.35	10.36	10.35	10.36	10.31	10.14	10.18	10.28	10.28
B-05-BC-02	B-07-BC1-04	O-05	0-07	10.98	10.76	10.76	11.01	11.01	10.76	10.75	10.75	10.71	10.53	10.59	10.70	10.70
B-06-BC-02	B-07-BC1-04	0-06	0-07	10.96	10.85	10.84	10.88	10.88	10.85	10.85	10.85	10.83	10.77	10.79	10.82	10.83

# Notes

Ω-m = ohm-meters

LBFU = lower basin-fill unit

Oxide = bedrock oxide unit

# TABLE 3 BULK ELECTRICAL CONDUCTIVITY MONITORING RESULTS HORIZON 3 (AT LBFU/OXIDE CONTACT)

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

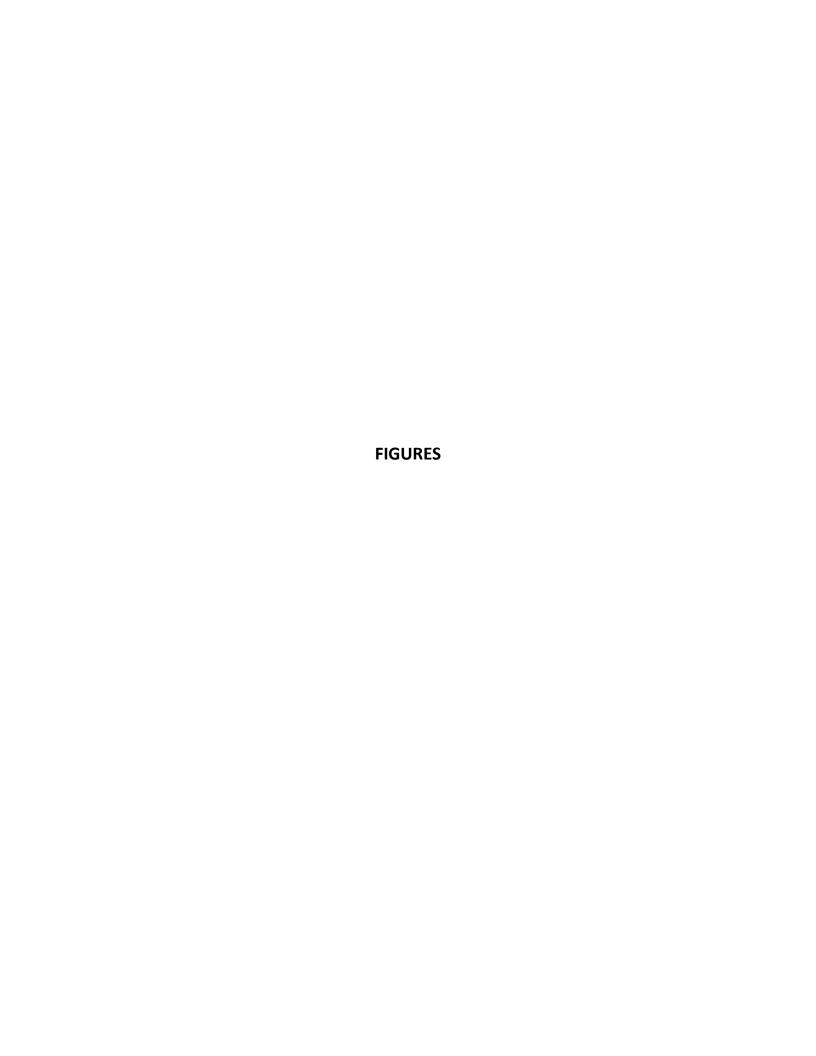
Electrode 1	Floatrada 2	Conding Wall	Possiving Wall						Appai	rent Resistivity	(Ω-m)					
Electrode 1	Electrode 2	Sending Well	Receiving Well	1/3/2019	1/11/2019	1/17/2019	1/24/2019	1/31/2019	2/8/2019	2/14/2019	2/21/2019	2/28/2019	3/6/2019	3/14/2019	3/21/2019	3/28/2019
B-01-BC-03	B-02-BC-03	0-01	O-02	15.71	15.59	15.60	15.53	15.71	15.55	15.58	15.56	15.52	15.52	15.56	15.50	15.52
B-01-BC-03	B-03-BC2-02	0-01	O-03	11.84	11.60	11.59	11.58	11.58	11.57	11.58	11.59	11.53	11.47	11.55	11.52	11.53
B-01-BC-03	B-04-BC-03	0-01	0-04	13.51	13.18	13.19	13.23	13.23	13.21	13.23	13.24	13.12	13.06	13.13	13.14	13.18
B-01-BC-03	B-05-BC-03	0-01	O-05	12.40	12.12	12.12	12.52	11.95	12.14	12.13	12.15	12.04	11.94	12.02	12.07	12.10
B-01-BC-03	B-06-BC-03	0-01	O-06	11.86	11.61	11.62	11.91	11.91	11.61	11.61	11.61	11.54	11.46	11.51	11.54	11.57
B-01-BC-03	B-07-BC2-02	0-01	0-07	12.26	12.11	12.10	12.09	12.09	12.10	12.09	12.10	12.05	12.01	12.06	12.05	12.06
B-02-BC-03	B-03-BC2-02	0-02	O-03	11.81	11.63	11.64	11.57	11.57	11.64	11.60	11.61	11.55	11.53	11.58	11.55	11.57
B-02-BC-03	B-04-BC-03	0-02	0-04	14.39	14.06	14.05	14.41	14.41	14.06	14.05	14.09	13.96	13.87	13.97	13.99	13.99
B-02-BC-03	B-05-BC-03	0-02	O-05	13.87	13.54	13.53	13.90	13.90	13.54	13.55	13.58	13.45	13.32	13.43	13.47	13.50
B-02-BC-03	B-06-BC-03	0-02	O-06	13.92	13.59	13.59	13.75	13.75	13.58	13.60	13.62	13.51	13.39	13.47	13.51	13.53
B-02-BC-03	B-07-BC2-02	0-02	0-07	12.88	12.63	12.61	12.59	12.59	12.62	12.62	12.62	12.55	12.51	12.55	12.55	12.58
B-03-BC2-02	B-04-BC-03	0-03	0-04	12.92	12.68	12.65	12.95	12.95	12.64	12.64	12.68	12.59	12.51	12.58	12.58	12.59
B-03-BC2-02	B-05-BC-03	0-03	O-05	13.30	13.03	13.01	13.20	13.20	12.98	13.02	13.03	12.94	12.79	12.87	12.93	12.94
B-03-BC2-02	B-06-BC-03	0-03	O-06	14.58	14.22	14.20	14.33	14.33	14.20	14.23	14.25	14.13	13.99	14.10	14.12	14.14
B-03-BC2-02	B-07-BC2-02	0-03	0-07	13.57	13.27	13.24	13.60	13.60	13.23	13.25	13.27	13.20	13.06	13.14	13.18	13.19
B-04-BC-03	B-05-BC-03	0-04	O-05	12.08	11.97	11.97	12.07	12.07	11.95	11.95	11.95	11.93	11.84	11.86	11.92	11.90
B-04-BC-03	B-06-BC-03	0-04	O-06	12.64	12.41	12.40	12.51	12.51	12.39	12.38	12.39	12.33	12.16	12.23	12.30	12.30
B-04-BC-03	B-07-BC2-02	0-04	0-07	12.86	12.56	12.55	12.43	12.43	12.55	12.58	12.59	12.49	12.35	12.45	12.49	12.52
B-05-BC-03	B-06-BC-03	0-05	O-06	10.78	10.63	10.63	10.62	10.62	10.64	10.62	10.62	10.58	10.42	10.49	10.54	10.56
B-05-BC-03	B-07-BC2-02	0-05	0-07	10.83	10.61	10.60	10.59	10.59	10.62	10.60	10.59	10.55	10.42	10.47	10.54	10.56
B-06-BC-03	B-07-BC2-02	O-06	0-07	11.16	11.06	11.06	11.06	11.06	11.06	11.06	11.05	11.03	10.97	10.97	11.02	11.04

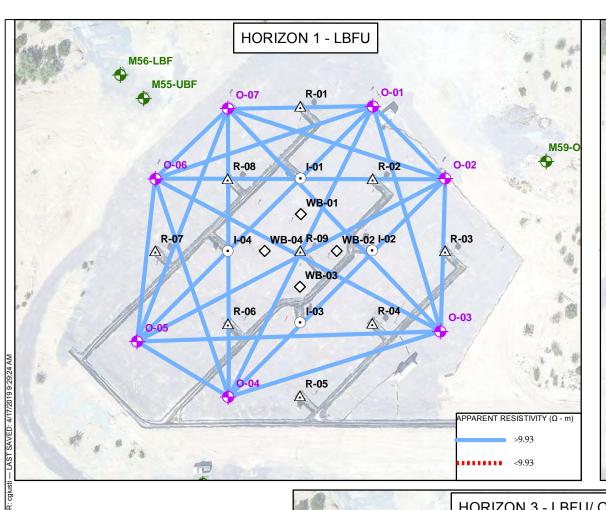
# Notes

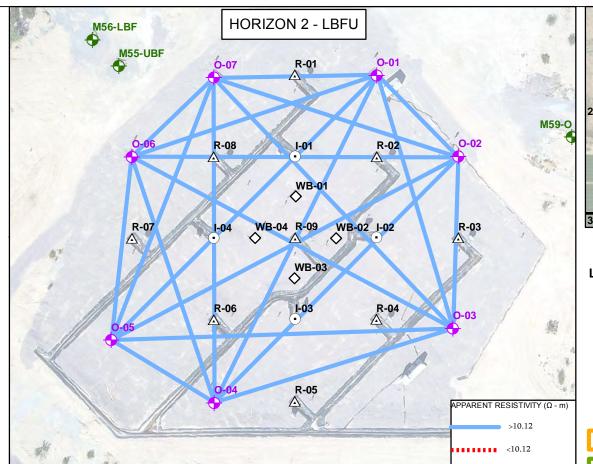
Ω-m = ohm-meters

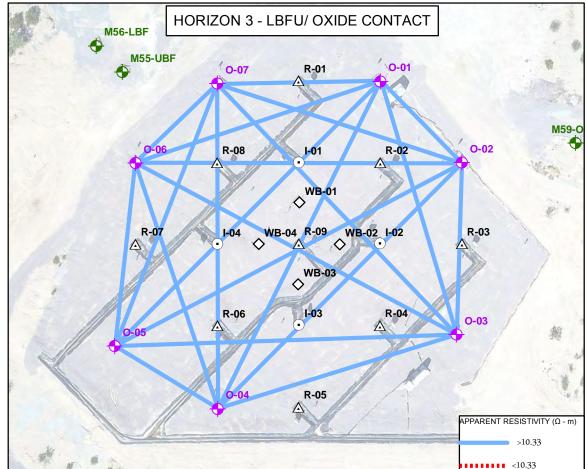
LBFU = lower basin-fill unit

Oxide = bedrock oxide unit



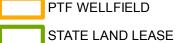








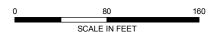
- INJECTION WELL
- OBSERVATION WELL
- SUPPLEMENTAL MONITORING WELL
- ♦ WESTBAY WELL



### NOTES

- 1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
- 2. (Ω m) = OHM METERS
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







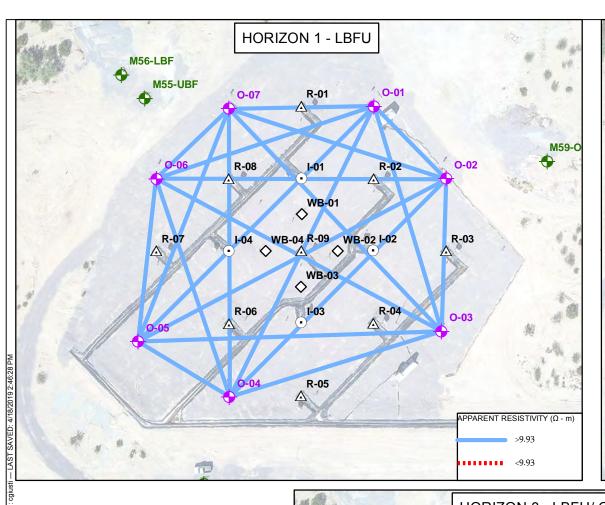
FLORENCE COPPER, INC. FLORENCE, ARIZONA

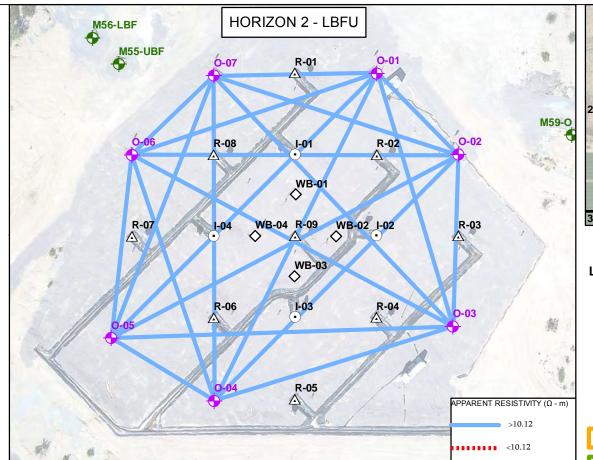
BASELINE APPARENT RESISTIVITY OF ELECTRODE PAIRS BY HORIZON- 1/3/2019 PRODUCTION TEST FACILITY

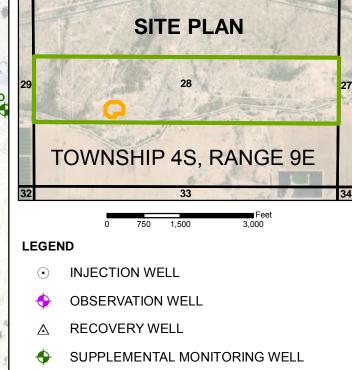


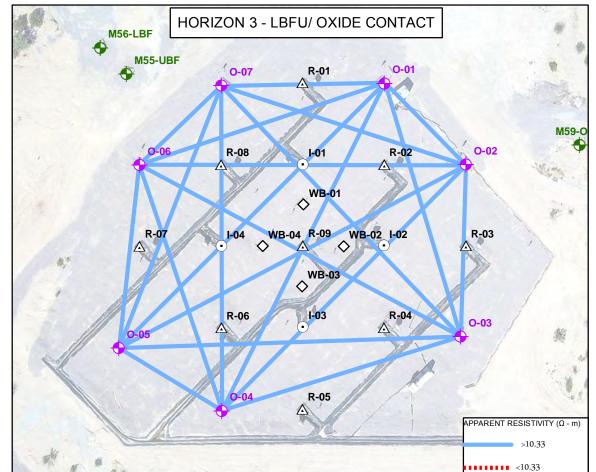
FIGURE 1

APRIL 2019









### NOTES

1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE

WESTBAY WELL

PTF WELLFIELD

STATE LAND LEASE

- 2. (Ω m) = OHM METERS
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







FLORENCE COPPER, INC. FLORENCE, ARIZONA

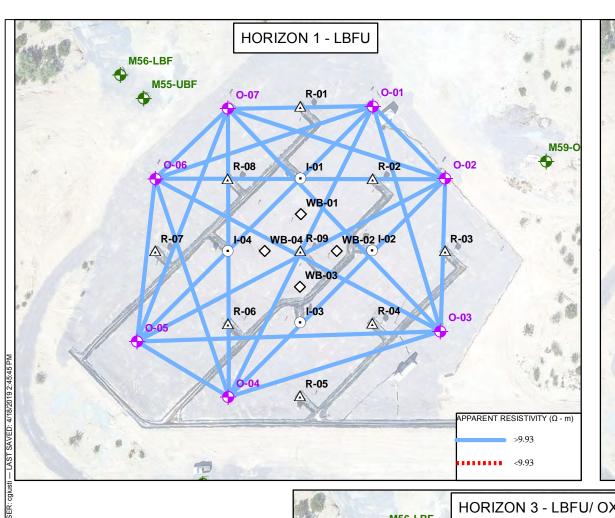
BASELINE APPARENT RESISTIVITY OF ELECTRODE PAIRS BY HORIZON- 1/11/2019 PRODUCTION TEST FACILITY

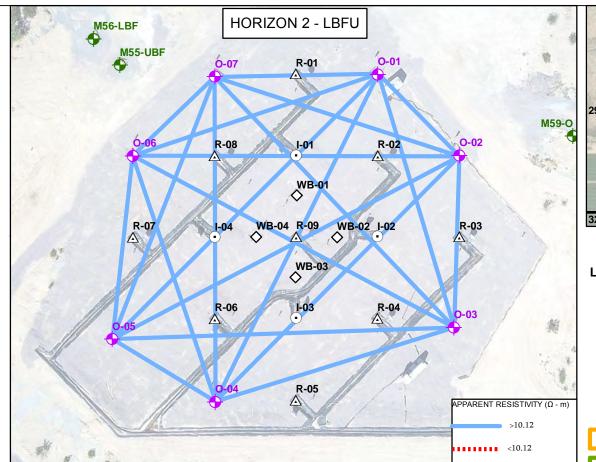
FIGURE 2

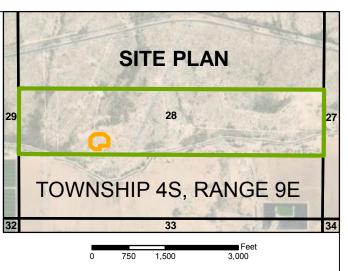


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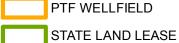
APRIL 2019







- INJECTION WELL
- **OBSERVATION WELL**
- RECOVERY WELL
- SUPPLEMENTAL MONITORING WELL
- WESTBAY WELL



### NOTES

- 1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
- 2.  $(\Omega m) = OHM METERS$
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







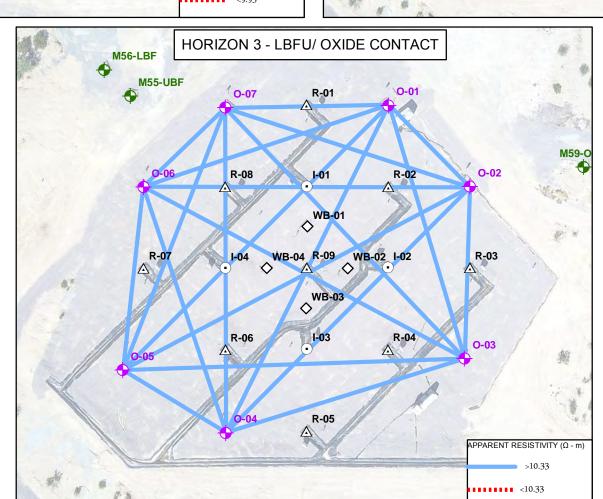
FLORENCE COPPER, INC. FLORENCE, ARIZONA

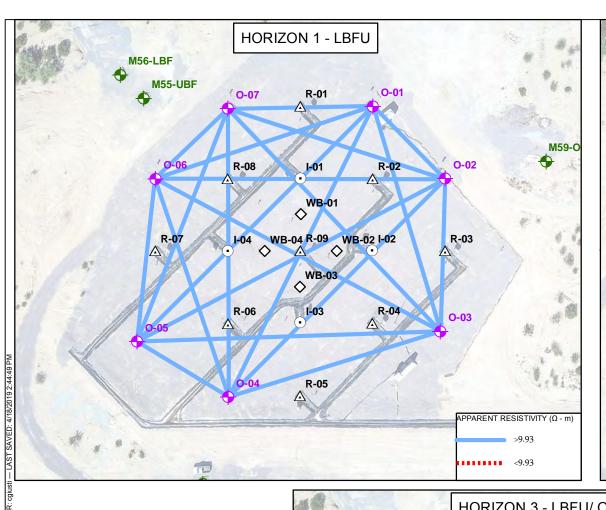
BASELINE APPARENT RESISTIVITY OF ELECTRODE PAIRS BY HORIZON- 1/17/2019

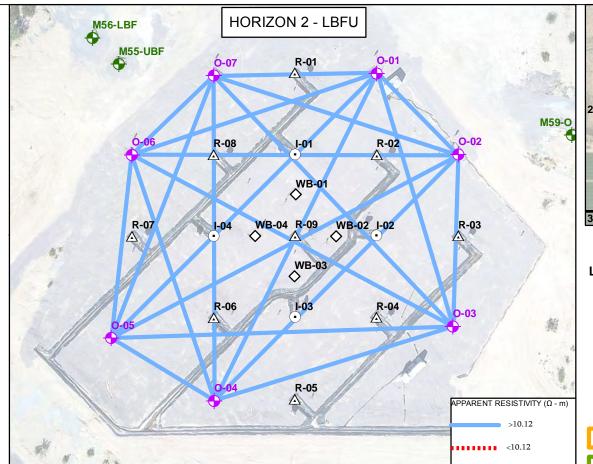


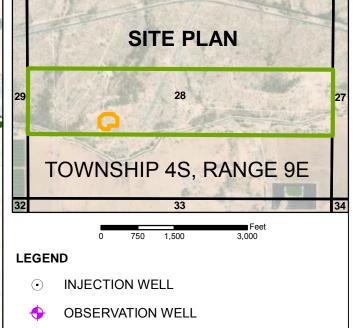
PRODUCTION TEST FACILITY

APRIL 2019

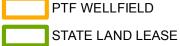








- RECOVERY WELL
- SUPPLEMENTAL MONITORING WELL
- WESTBAY WELL



### NOTES

- 1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
- 2.  $(\Omega m) = OHM METERS$
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







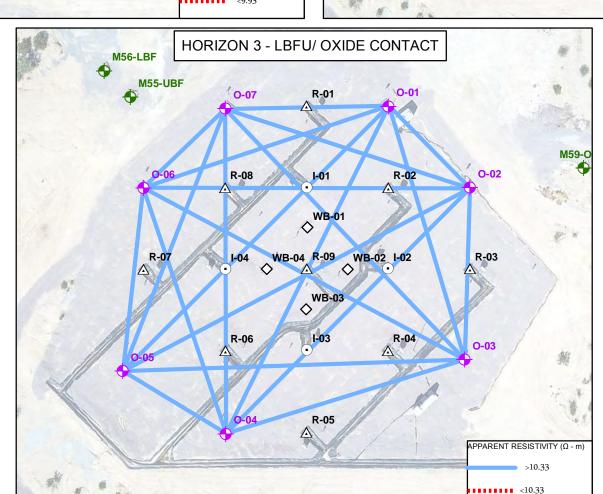
FLORENCE COPPER, INC. FLORENCE, ARIZONA

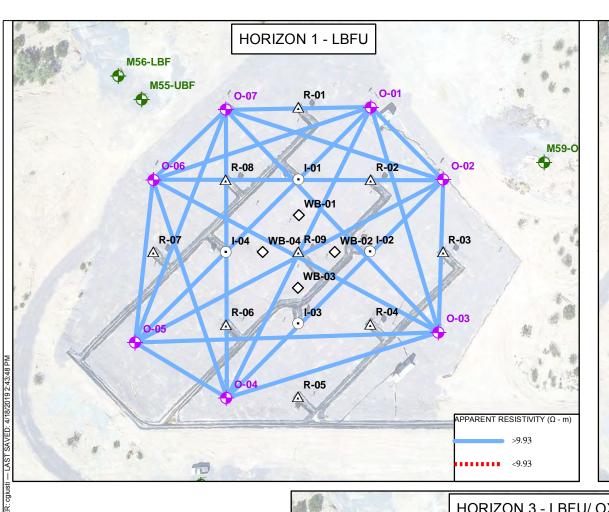
BASELINE APPARENT RESISTIVITY OF ELECTRODE PAIRS BY HORIZON- 1/24/2019

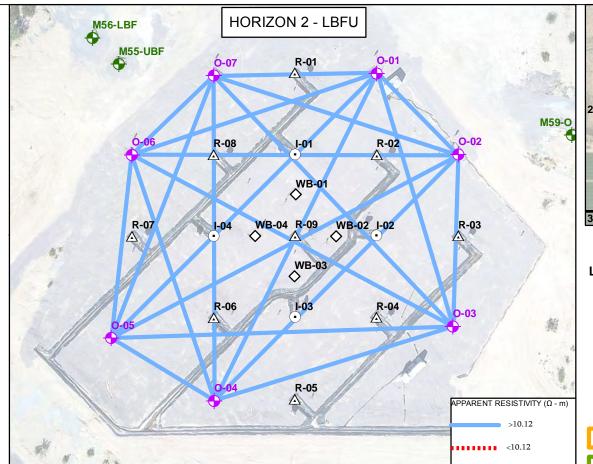


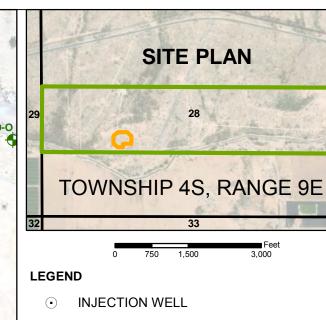
PRODUCTION TEST FACILITY

APRIL 2019

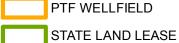








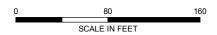
- **OBSERVATION WELL**
- RECOVERY WELL
- SUPPLEMENTAL MONITORING WELL
- WESTBAY WELL



### NOTES

- 1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
- 2.  $(\Omega m) = OHM METERS$
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







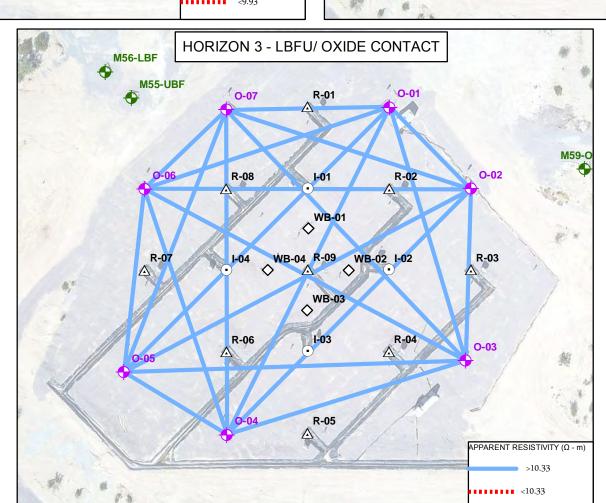
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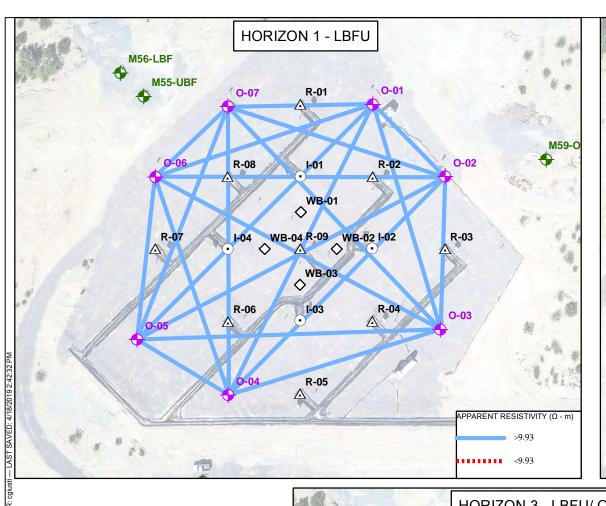
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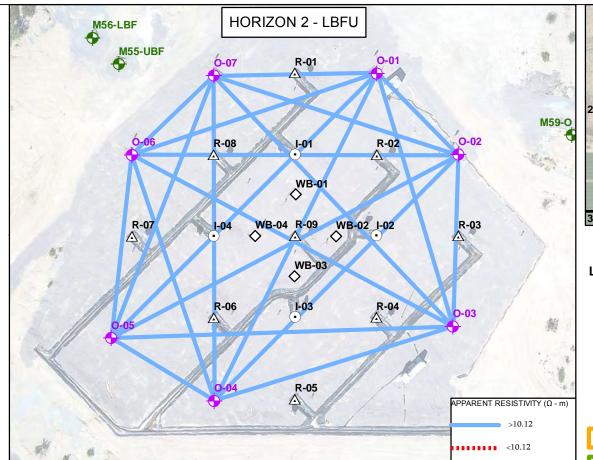


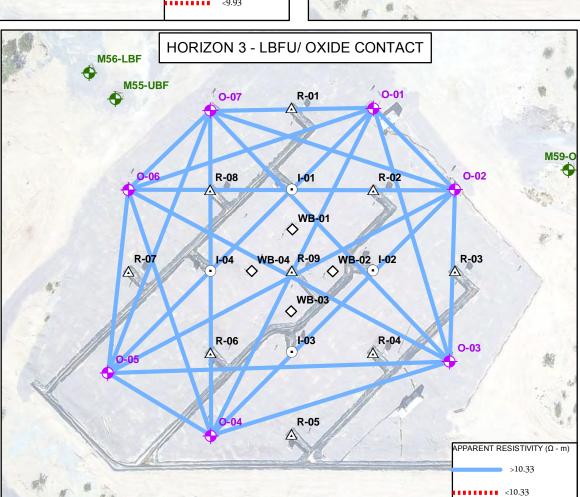
PRODUCTION TEST FACILITY

APRIL 2019



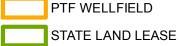








- INJECTION WELL
- OBSERVATION WELL
- SUPPLEMENTAL MONITORING WELL
- ♦ WESTBAY WELL



### NOTES

- 1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE
- 2. (Ω m) = OHM METERS
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018





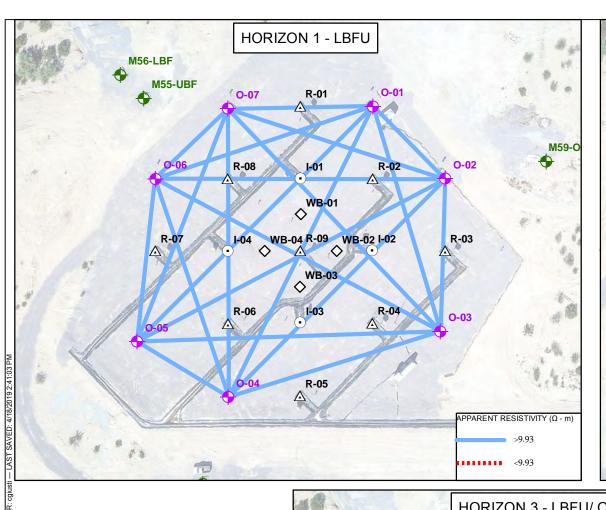


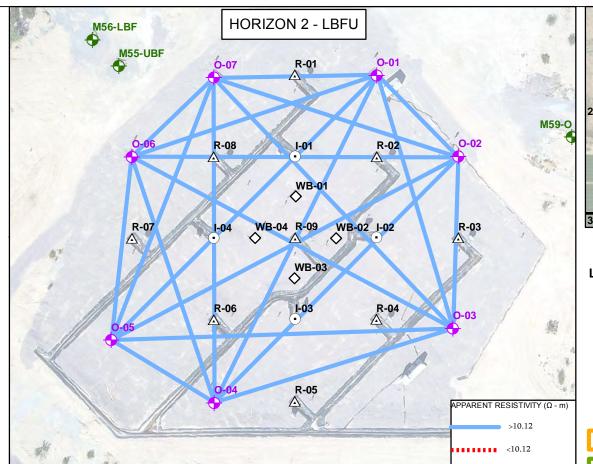
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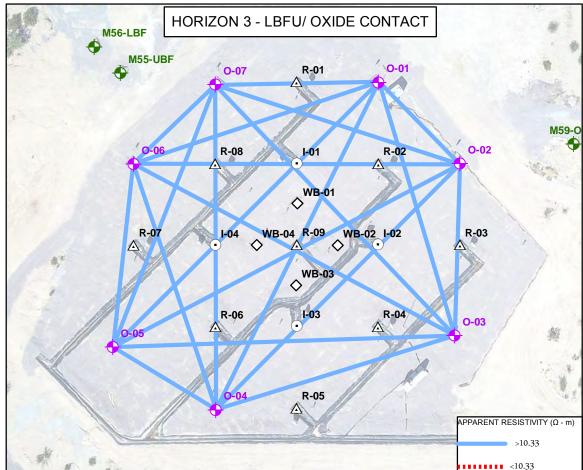
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APRIL 2019







- INJECTION WELL
- OBSERVATION WELL
- SUPPLEMENTAL MONITORING WELL

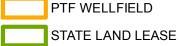
SITE PLAN

28

TOWNSHIP 4S, RANGE 9E

1,500

♦ WESTBAY WELL



### NOTES

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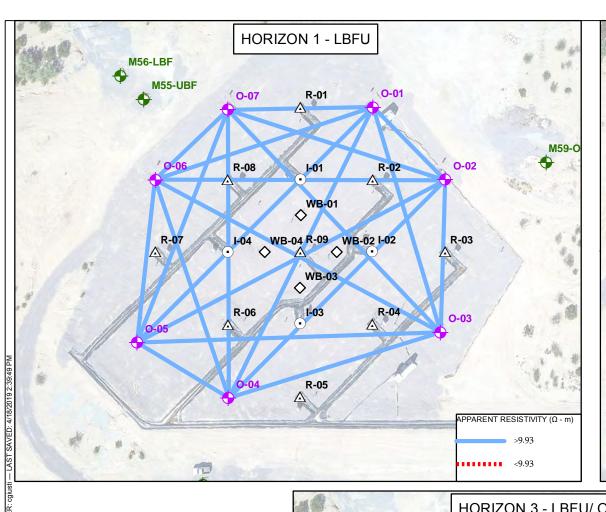


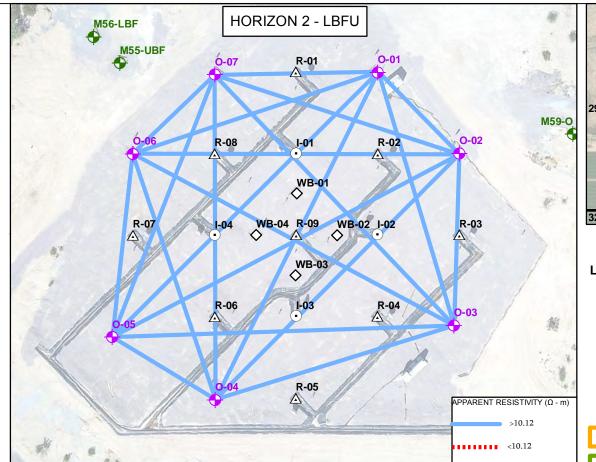
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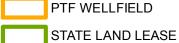
APRIL 2019 FIGURE 7







- INJECTION WELL
- **OBSERVATION WELL**
- RECOVERY WELL
- SUPPLEMENTAL MONITORING WELL
- WESTBAY WELL



### NOTES

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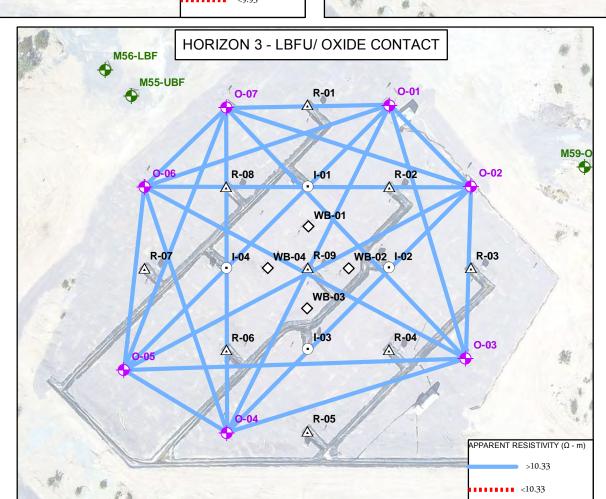
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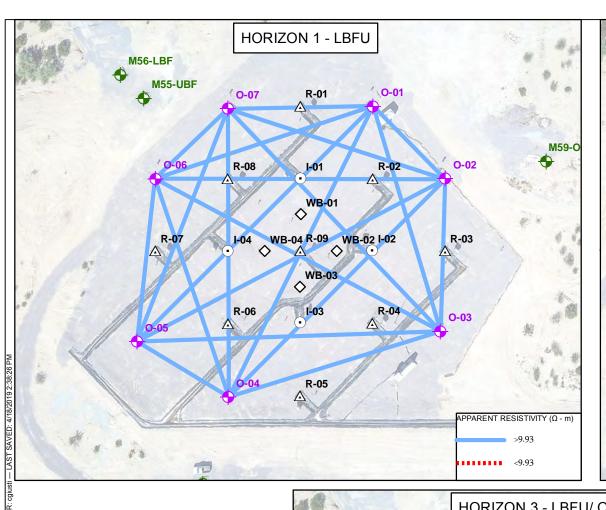
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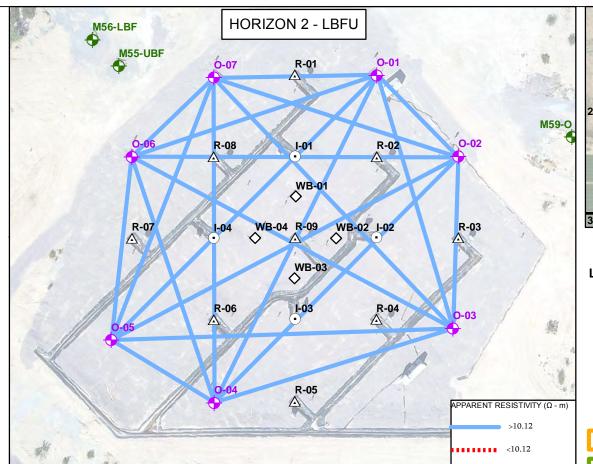


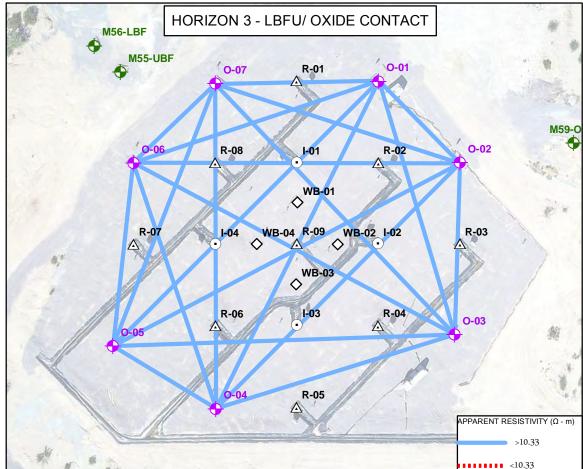
PRODUCTION TEST FACILITY

APRIL 2019



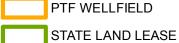








- INJECTION WELL
- OBSERVATION WELL
- **♦** SUPPLEMENTAL MONITORING WELL
- ♦ WESTBAY WELL



### NOTES

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- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018





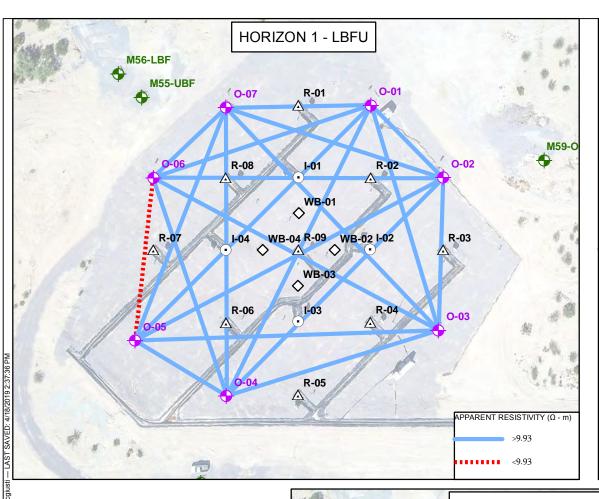


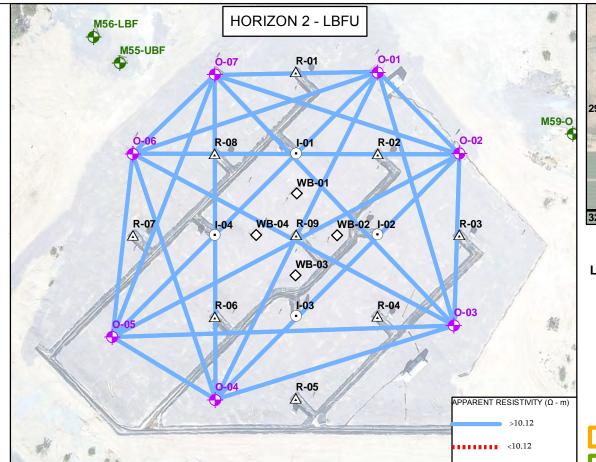
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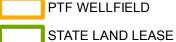
APRIL 2019







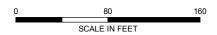
- INJECTION WELL
- **OBSERVATION WELL**
- RECOVERY WELL
- SUPPLEMENTAL MONITORING WELL
- WESTBAY WELL



#### NOTES

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- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







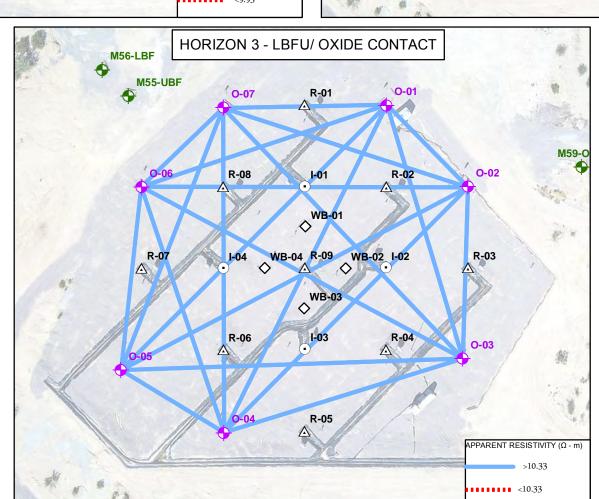
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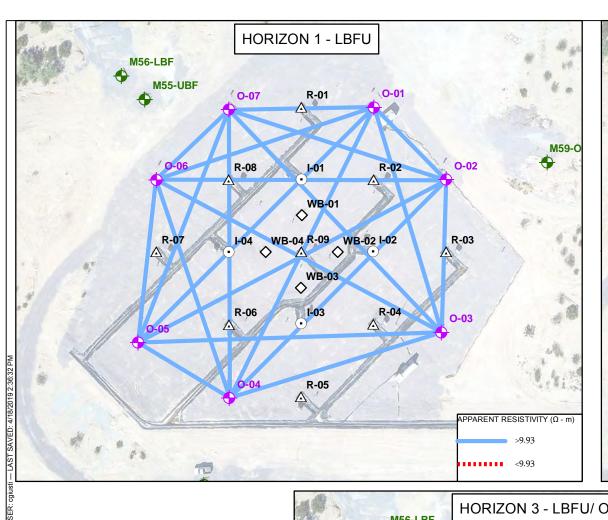
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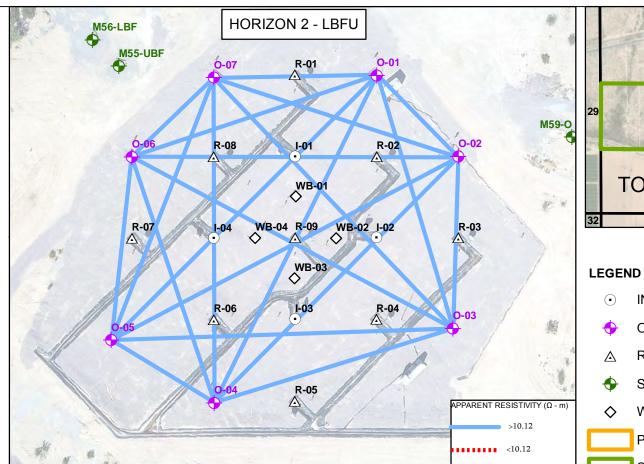


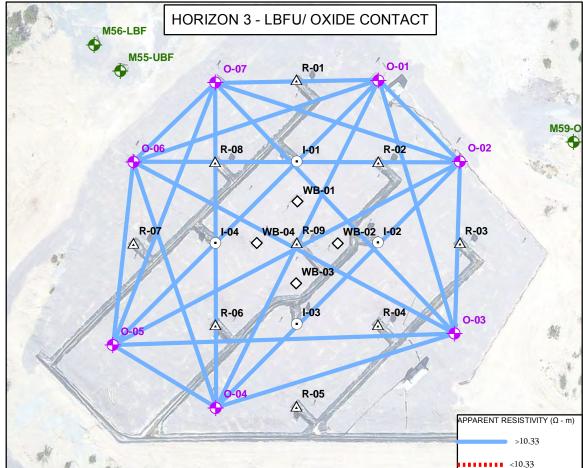
PRODUCTION TEST FACILITY

APRIL 2019









# NOTES

1. ALL LOCATIONS AND DIMENSIONS APPROXIMATE

INJECTION WELL

RECOVERY WELL

WESTBAY WELL

PTF WELLFIELD

STATE LAND LEASE

**OBSERVATION WELL** 

- 2.  $(\Omega m) = OHM METERS$
- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018

SITE PLAN

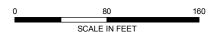
28

TOWNSHIP 4S, RANGE 9E

1,500

SUPPLEMENTAL MONITORING WELL







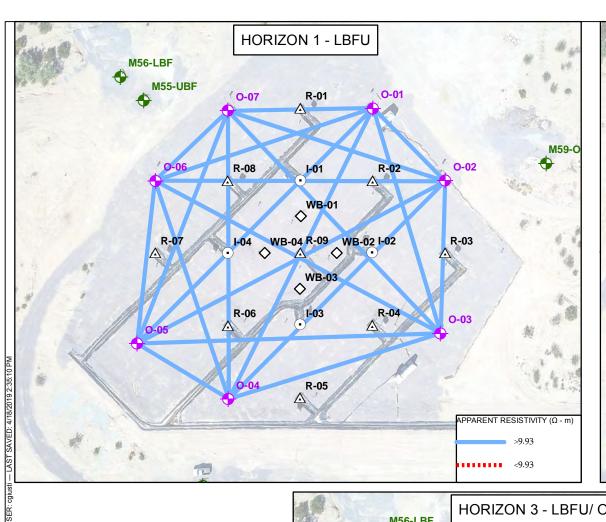
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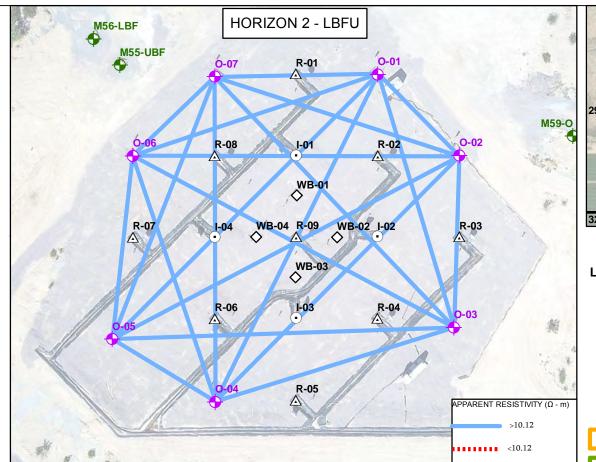
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PRODUCTION TEST FACILITY

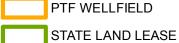
FIGURE 11 APRIL 2019







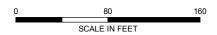
- INJECTION WELL
- OBSERVATION WELL
- SUPPLEMENTAL MONITORING WELL
- ♦ WESTBAY WELL



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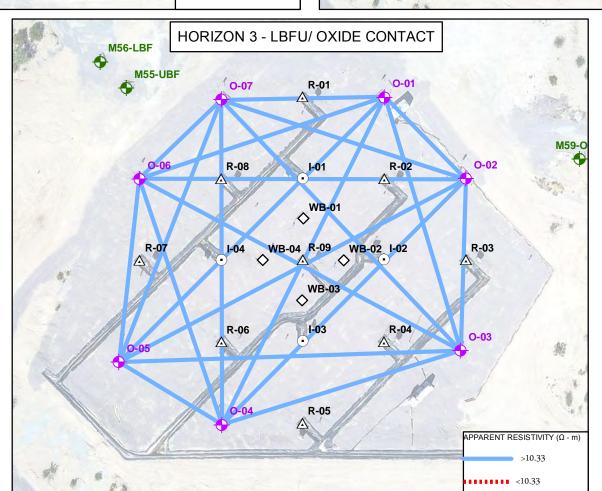
FLORENCE COPPER, INC. FLORENCE, ARIZONA

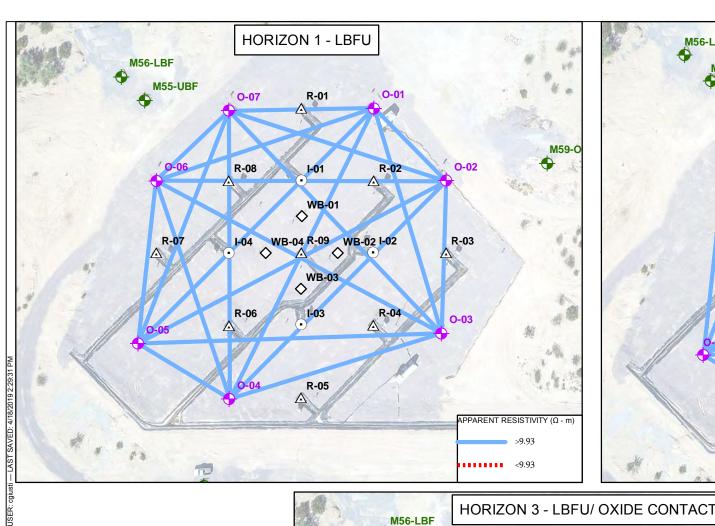
BASELINE APPARENT RESISTIVITY
OF ELECTRODE PAIRS BY
HORIZON- 3/21/2019
PRODUCTION TEST FACILITY



PRODUCTION TEST FACILITY

APRIL 2019





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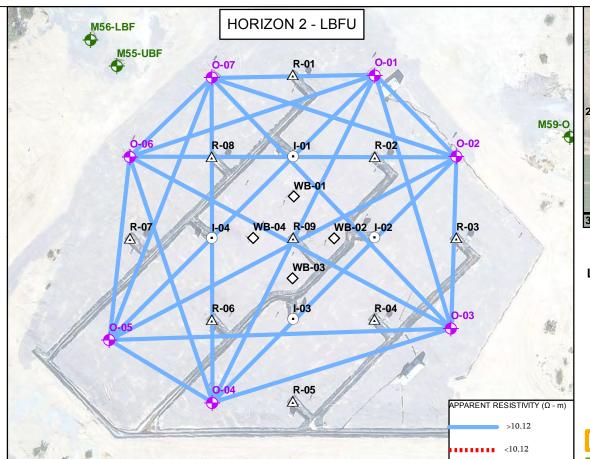
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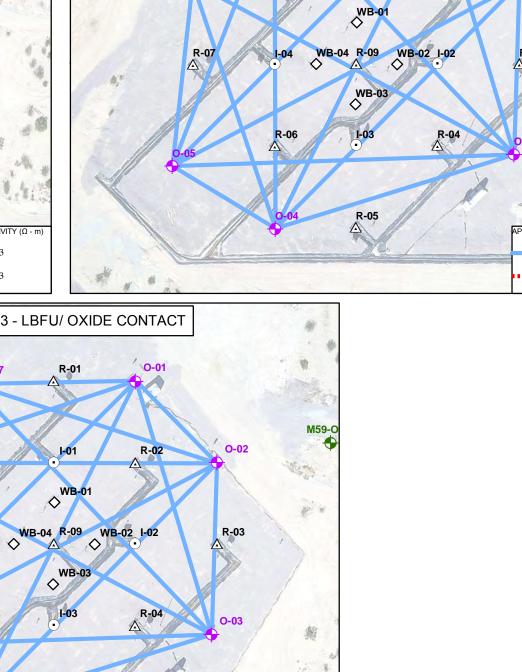
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R-05





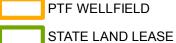
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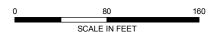
- INJECTION WELL
- OBSERVATION WELL
- SUPPLEMENTAL MONITORING WELL
- ♦ WESTBAY WELL



#### NOTES

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- 3. AREIAL IMAGERY SOURCE: FLORENCE COPPER INC., OCTOBER 2018







FLORENCE COPPER, INC. FLORENCE, ARIZONA

BASELINE APPARENT RESISTIVITY
OF ELECTRODE PAIRS BY
HORIZON- 3/28/2019
PRODUCTION TEST FACILITY

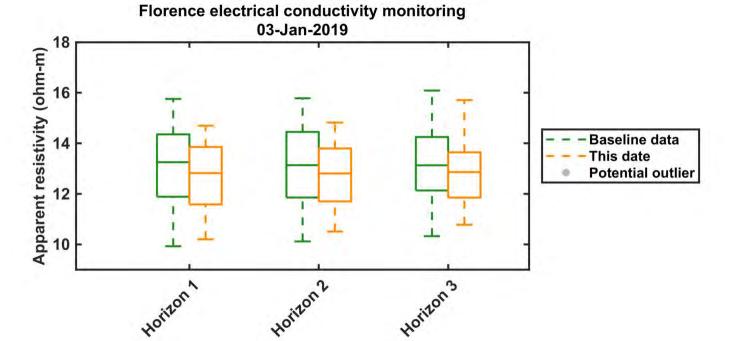


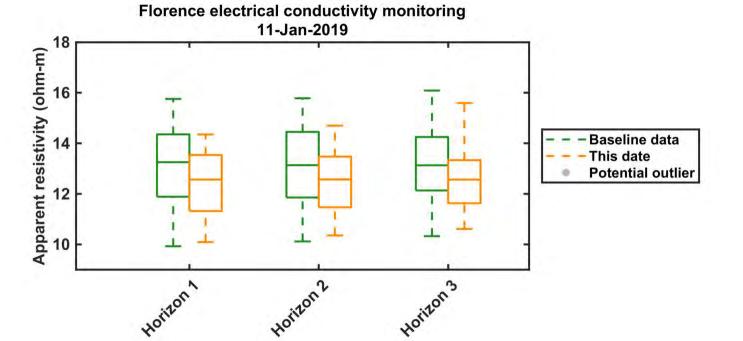
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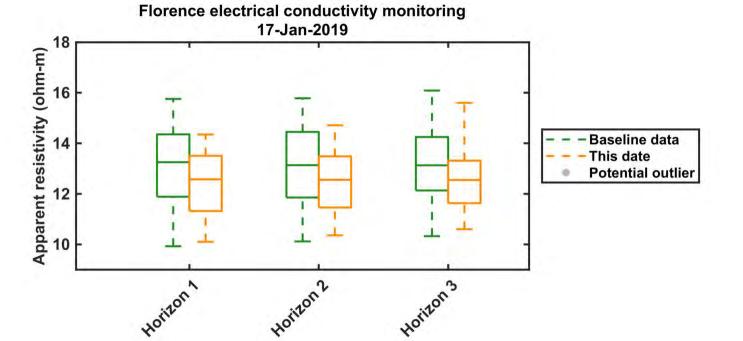
APRIL 2019 FIGURE 13

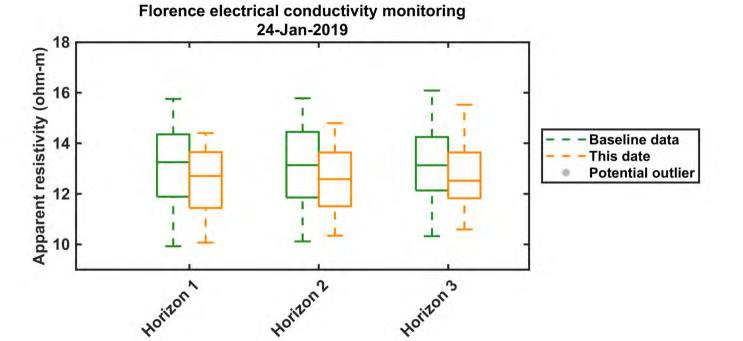
## **ATTACHMENT A**

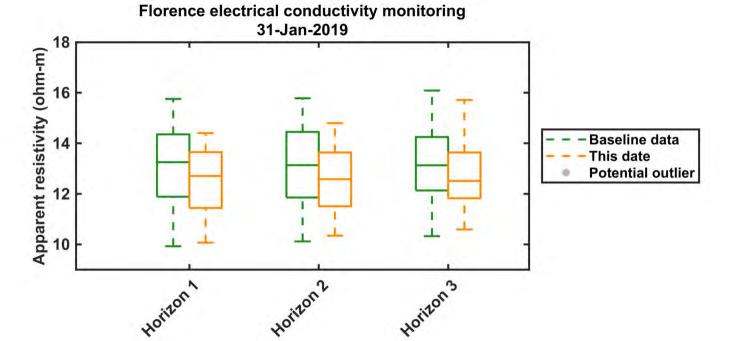
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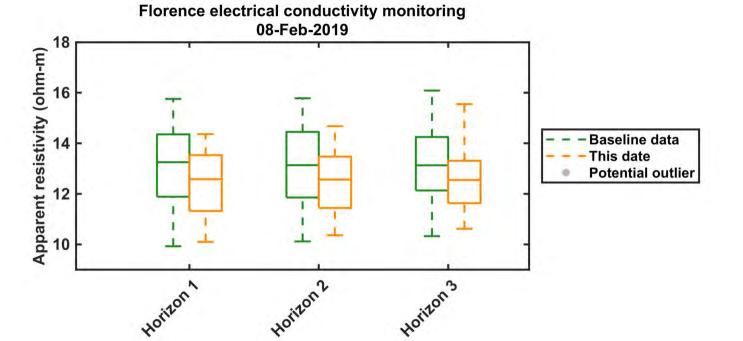


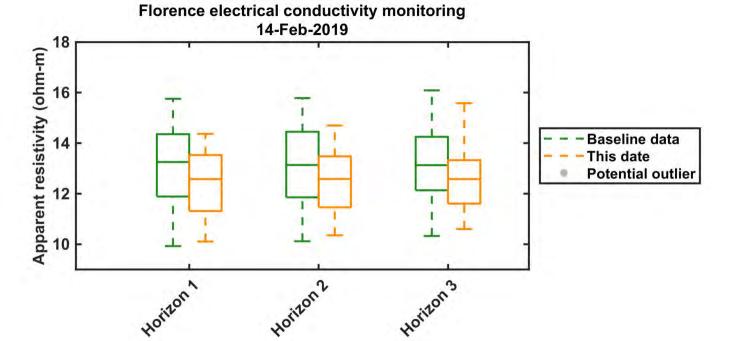


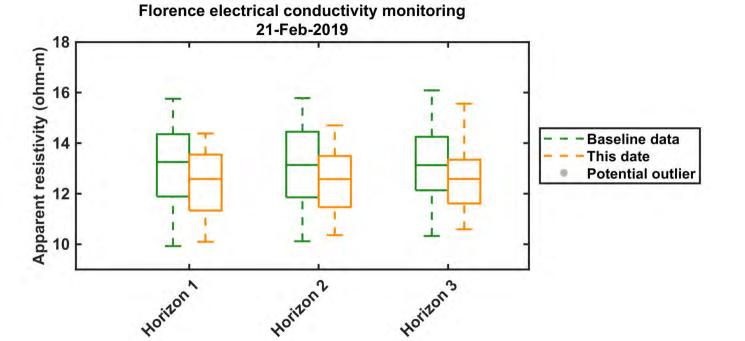


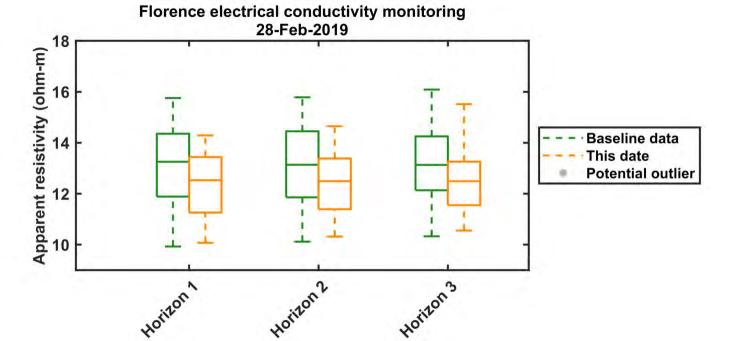


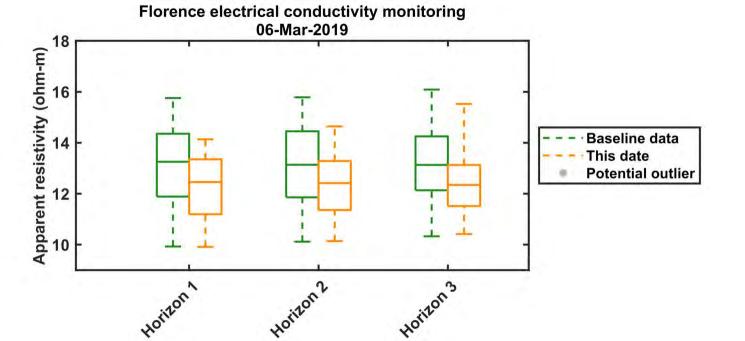


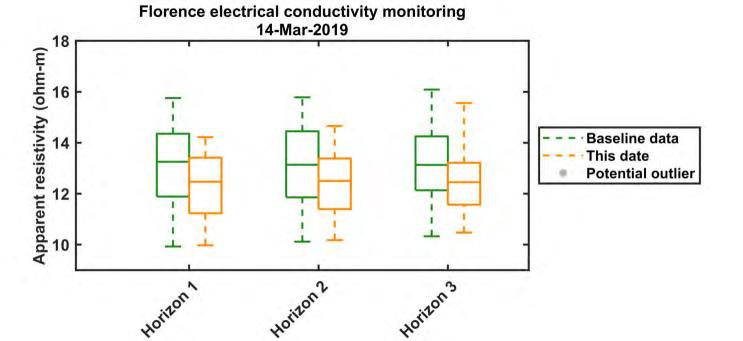


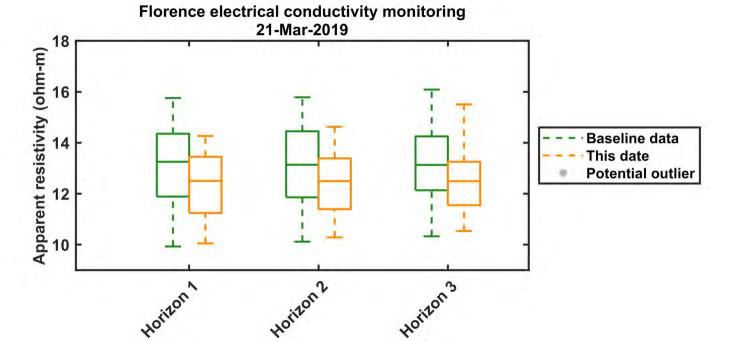


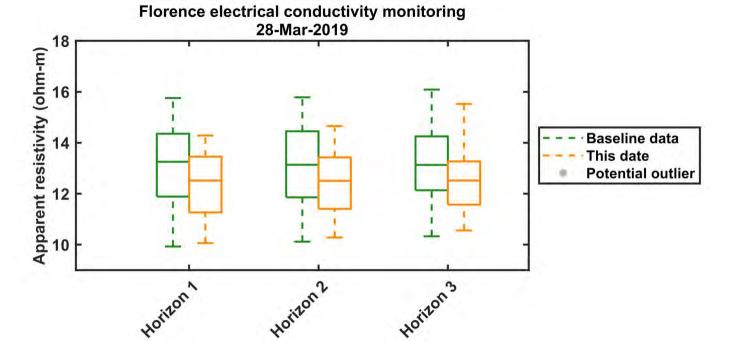






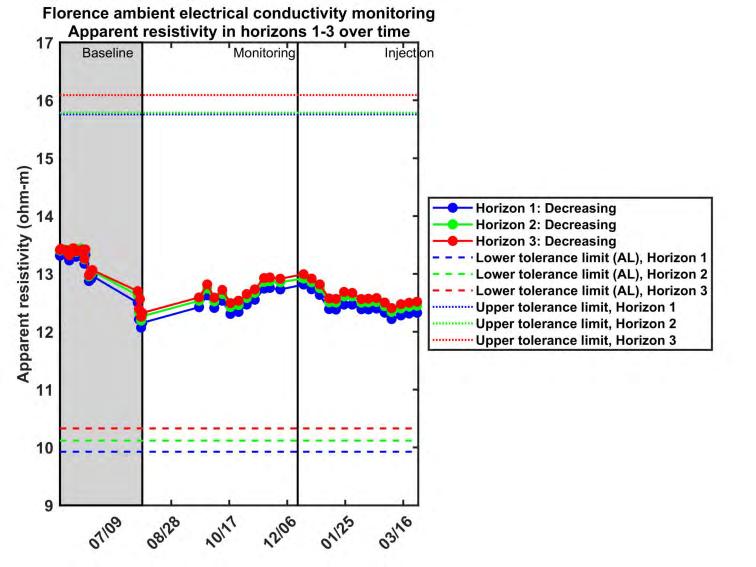






## **ATTACHMENT B**

**Summary Plot of Bulk Electrical Conductivity** 



## **EXHIBIT D-6**

APP Amendment Application Attachment 13, Technical Requirements – Contingency Plan

Attachment 13
Technical Requirements – Contingency Plan (Item 19G)
Application to Amend APP No. P-101704

Florence Copper Project Florence Copper Inc.

June 2019



### **Table of Contents**

Table	of Conte	nts		1
13.1	INTROI	DUCTI	ION	2
13.2	CONTINGENCY PLAN ELEMENTS			2
13.3	.3 DOCUMENT CONTROL			2
13.4	EMERGENCY RESPONSE PROVISIONS TO ADDRESS AN IMMINENT AND SUBSTANTIAL			
	ENDANGERMENT TO PUBLIC HEALTH OR THE ENVIRONMENT			3
	13.4.1 Conditions Requiring Emergency Response			3
	13.4.2 Designation of an Emergency Response Coordinator			3
	13.4.3 Notification			3
	13.4.4 Preparation for Response to Reported Conditions			4
	13.4.5 Emergency Response Procedures			4
	13.4.6 Reports of Responses to Conditions Potentially Causing Imminent and Substantial			
	Endangerment to Public Health or the Environment			5
13.5	CONTI	NGEN	CY PLAN REQUIREMENTS	5
2.6	Contingency Plan Requirements			5
	2.6.1	Gen	eral Contingency Plan Requirements	5
	2.6.2	Exce	eeding of Alert Levels	6
	2.6.2.1		Exceeding of Performance Levels Set for Operational Conditions	6
	2.6.2.2		Exceedance of Alert Level #1 for Normal Liner Leakage	7
	2.6	5.2.3	Exceedance of Alert Level #2 (Discharge Limit) for Liner Failure or Rips	8
	2.6	5.2.4	Exceeding of Alert Levels in Groundwater Monitoring	9
	2.6	5.2.5	Exceeding of BADCT Alert Levels for Injection/Recovery Well Operation	11
	2.6	5.2.6	Exceeding of Alert Levels Set for Maximum Injection Pressure	12
	2.6	5.2.7	Exceeding Alert Levels for Well Bore Electrical Conductivity	12
	2.6	5.2.8	Exceeding Alert Levels for Fluid Electrical Conductivity	13
	2.6	5.2.9	Exceeding an Alert Level for Cone of Depression	13
	2.6.3	Disc	harge Limitations Violations	14
		5.3.1	Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid	14
	2.6.3.2		Overtopping of a Surface Impoundment	15
	2.6	5.3.3	Inflows of Unexpected Materials to a Surface Impoundment	16
	2.6.3.4		Unexpected Loss of Fluid in the Injection/Recovery Wells at the Well Field	17
	2.6.4	•	ifer Quality Limit Violation	18
	2.6.5		ergency Response and Contingency Requirements for Unauthorized Discharges	
	pursuant to A.R.S. §49-201(12) and pursuant to A.R.S. § 49-241		19	
	2.6.5.1		Duty to Respond	19
	2.6.5.2		Discharge of Hazardous Substances or Toxic Pollutants	19
	2.6.5.3		Discharge of Non-hazardous Materials	19
		5.5.4	Reporting Requirements	19
	2.6.6	Corr	rective Actions	20

# Application to Amend Aquifer Protection Permit No. P-101704 Florence Copper Project

### Attachment 13 (Item 19G): Technical Requirements — Contingency Plan

#### 13.1 INTRODUCTION

This Attachment conveys the contingency plan proposed in support of the application for significant amendment (application) of Aquifer Protection Permit (APP) No. P-101704 requested by Florence Copper Inc. (Florence Copper) in accordance with Arizona Administrative Code (A.A.C.) R18-9-A211(A)(1). The information presented in this Attachment is provided in response to Item 19G (Contingency Plan) of the application form.

As required by A.A.C. R18-9-A204, the Contingency Plan presented in this Attachment includes policies and procedures for detecting and responding to:

- A violation of an Aquifer Water Quality Standard (AWQS) or an Aquifer Quality Limit (AQL);
- A violation of a discharge limitation;
- A violation of any other permit condition;
- An exceedance of an Alert Level (AL); or
- An imminent and substantial endangerment to the public health or the environment.

Sections 13.2 through 13.4 of this Attachment provide an overview of general contingency and emergency response procedures. Section 13.5 provides a description of plans for responding to specific events. Section 13.7 provides a formal review of plan elements as they may be translated into permit requirements.

#### 13.2 CONTINGENCY PLAN ELEMENTS

The Contingency Plan includes the following elements:

- Document control;
- A description of the general procedures to ensure unauthorized discharges are promptly addressed and mitigated;
- An emergency response procedure in the event of an imminent and substantial endangerment to the public health or the environment; and
- Descriptions of contingency planning to address specific events.

#### 13.3 DOCUMENT CONTROL

Once approved, this Contingency Plan will be maintained in the locations where day-to-day decisions for operating the planned in-situ copper recovery (ISCR) facility are made. Additional copies of the Contingency Plan may be maintained at other locations as appropriate. All employees responsible for the operation of the ISCR facility will be advised of the location of the Contingency Plan.

The Contingency Plan will be formally reviewed on an annual basis, or in the event of a discharge resulting in any of the conditions identified in Section 13.1, whichever comes sooner. The Contingency Plan will also be promptly revised upon any change to the information in the plan.

Document control will be maintained to ensure that all revisions are promptly included and correctly replaced in all copies of the Contingency Plan. The Contingency Plan, and revisions, will be signed and approved by the Florence Copper general manager.

## 13.4 EMERGENCY RESPONSE PROVISIONS TO ADDRESS AN IMMINENT AND SUBSTANTIAL ENDANGERMENT TO PUBLIC HEALTH OR THE ENVIRONMENT

#### 13.4.1 Conditions Requiring Emergency Response

Florence Copper will act immediately to correct any condition resulting from an unauthorized discharge on the Florence Copper Project (FCP) site if that condition could pose an imminent and substantial endangerment to the public health or environment, such as the following:

- A release that occurs outside a containment area and that exceeds a reportable quantity limit as
  per reporting requirements in the Comprehensive Environmental Response, Compensation and
  Liability Act or the Superfund Amendments and Reauthorization Act;
- A catastrophic failure of tanks or water impoundment; and
- A catastrophic event such as a flood that exceeds the 100-year storm event, an earthquake or fire, civil unrest, or vandalism that causes a release to the environment.

#### 13.4.2 Designation of an Emergency Response Coordinator

An emergency response coordinator will be responsible for the activation of this Contingency Plan to address an imminent and substantial endangerment to public health or the environment. The emergency response coordinator will be the FCP general manager, or other employee delegated with the authority to act as emergency response coordinator. The emergency response coordinator will be appropriately trained and will have the necessary level of experience and supervising authority to commit resources to respond to and address an imminent and substantial endangerment to public health or the environment. The primary emergency response coordinator's name and contact location, and telephone numbers will be posted at all times in the FCP control room. The primary emergency response coordinator will delegate authority to an appropriate alternate to act as emergency response coordinator in the primary emergency coordinator's absence.

#### 13.4.3 Notification

Upon notification of a condition that could pose an imminent and substantial endangerment to public health or the environment, the emergency response coordinator will immediately notify:

• Local emergency services – 1-520-866-6411 within 24 hours for any unauthorized discharge of hazardous or non-hazardous material which (a) has the potential to cause an Aquifer Quality

Limit (AQL) to be exceeded, or (b) could pose an endangerment to public health or the environment;

- The National Response Center for any reportable quantity released to the environment 1-800-424-8802;
- Arizona Department of Environmental Quality (ADEQ) 1-602-771-2300;
- The FCP general manager, if the emergency response coordinator is not the general manager.
   The name and telephone number of the general manager and/or the emergency response coordinator will be placed in each copy of the FCP Contingency Plan;
- Corporate management; and
- Emergency response contractors, as appropriate.

#### 13.4.4 Preparation for Response to Reported Conditions

Florence Copper will ensure that all FCP personnel are trained and certified in first aid, chemical safety, and in the use of Material Safety Data Sheets in accordance with applicable federal, state, and local health, safety, and environmental regulations. In addition, personnel will receive spill- and emergency-response training to identify, clean-up, report on, and otherwise manage unauthorized discharges relative APP No. P-101704. this Contingency Plan and related features of the Storm Water Pollution Prevention Plan (SWPPP). The Contingency Plan and the SWPPP will be posted in the FCP control room and will be reviewed at least annually by the Technical Service Manager and revised as necessary.

The FCP will be equipped with spill-response clean-up materials and equipment suitable to address minor spills. The clean-up materials and equipment will be for protecting employees, equipment, and the environment from acidic, corrosive, or otherwise damaging materials and will include, but not be limited to, protective gear, spill containment booms, lime for acid neutralization, and waste disposal bins. The location of all such equipment will be shown on a poster in the FCP control room.

Florence Copper will maintain plans with local response emergency agencies and with emergency response contractors, as appropriate, for responses to imminent and substantial endangerment to public health or the environment.

#### 13.4.5 Emergency Response Procedures

Upon notification of a condition that could pose an imminent and substantial endangerment to public health or the environment, the emergency response coordinator will immediately assess possible hazards associated with the reported condition.

If the emergency response coordinator determines the reported condition does not pose an imminent and substantial endangerment to public health or the environment, they will direct actions to promptly cease the discharge and isolate the discharged material. Discharged material will be removed as soon as possible. Within 24 hours following the discovery of a discharge of hazardous or non-hazardous

material which has the potential to cause an AQL to be exceeded, the emergency response coordinator will notify the ADEQ Groundwater Protection Value Stream of corrective actions taken and planned.

If the emergency response coordinator determines the reported condition could pose an imminent and substantial endangerment to public health or the environment, they will direct actions to promptly:

- Notify consistent with Section 13.4.3;
- Notify all facility personnel of the condition and advise them of any area to be evacuated/isolated;
- Direct that operations be discontinued as appropriate to stop the discharge;
- Take steps to safely isolate and contain material discharged;
- Begin the process of recording information regarding the nature and extent of discharges
  potentially causing the imminent and substantial endangerment to public health or the
  environment and recording information on individuals who may have been exposed during the
  incident, including the name of individuals, the nature of exposure, and any medical treatment
  the individual received.

## 13.4.6 Reports of Responses to Conditions Potentially Causing Imminent and Substantial Endangerment to Public Health or the Environment

Florence Copper will submit a written report to the ADEQ Groundwater Protection Value Stream for any unauthorized discharge of hazardous or non-hazardous material which (a) has the potential to cause an Aquifer Quality Limit (AQL) to be exceeded, or (b) could pose an endangerment to public health or the environment. The report will be submitted within 30 days of the discharge and will summarize the event, including any human exposure, and will provide a description of response activities and results of those activities.

#### 13.5 CONTINGENCY PLAN REQUIREMENTS

The following Contingency Plan requirements (Section 2.6) will be replaced by provisions of the amended APP No. P-101704 when it is issued by ADEQ. The section numbering and language presented below reflect the anticipated numbering and proposed language for contingency plan section of the amended APP No. P-101704.

#### 2.6 Contingency Plan Requirements

[Arizona Revised Statutes (A.R.S.) § 49-243(K)(3), (K)(7) and A.A.C. R18-9-A204 and R18-9-A205]

#### 2.6.1 General Contingency Plan Requirements

At least one copy of this permit and the approved contingency and emergency response plans submitted in the application shall be maintained at the location where day-to-day decisions regarding the operation of the facility are made. The permittee shall be aware of and follow the contingency and emergency plans.

Any AL that is exceeded or any violation of an AQL, discharge limit (DL), or other permit condition shall be reported to ADEQ following the reporting requirements in Section 2.7.3.

Some contingency actions may involve verification sampling. Verification sampling shall consist of the first follow-up sample collected from a location that previously indicated a violation or the exceedance of an AL. Collection and analysis of the verification sample shall use the same protocols and test methods to analyze for the pollutant or pollutants that exceeded an AL or violated an AQL. The permittee is subject to enforcement action for the failure to comply with any contingency actions in this permit. Where verification sampling is specified in this permit, it is the option of the permittee to perform such sampling. If verification sampling is not conducted within the timeframe allotted, ADEQ and the permittee shall presume the initial sampling result to be confirmed as if verification sampling has been conducted. The permittee is responsible for compliance with contingency plans relating to the exceedance of an AL or violation of a DL, AQL, or any other permit condition.

#### 2.6.2 Exceeding of Alert Levels

#### 2.6.2.1 Exceeding of Performance Levels Set for Operational Conditions

- 1. Performance Levels Set for Freeboard. In the event that freeboard performance levels in a surface impoundment listed in Section 4.1, Table 4.1-3 are not maintained, the permittee shall:
  - a. As soon as practicable, cease or reduce discharging to the impoundment to prevent overtopping. Remove and properly dispose or recycle to other operations the excess fluid in the reservoir until the water level is restored at or below the permitted freeboard limit.
  - b. Within 5 days of discovery, evaluate the cause of the incident and adjust operational conditions as necessary to avoid future occurrences.
  - c. Record in the facility log, the amount of fluid removed, a description of the removal method, and the disposal arrangements. The facility log shall be maintained according to Section 2.7.2 (Operational Inspection / Log Book Recordkeeping).
  - d. The facility is no longer on alert status once the operational indicator no longer indicates that the freeboard performance level is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

#### 2. Performance Levels, Other Than Freeboard

- a. If an operational performance level (PL) listed in Section 4.1, Table 4.1-3 has been observed or noted during required inspection and operational monitoring, such that the result could cause or contribute to an unauthorized discharge, the permittee shall immediately investigate to determine the cause of the condition. The investigation shall include the following:
  - i. Inspection, testing, and assessment of the current condition of all treatment or pollutant discharge control systems that may have contributed to the operational performance condition.
  - ii. Review of recent process logs, reports, and other operational control

information to identify any unusual occurrences.

- b. The PL exceedance, results of the investigation, and any corrective action taken shall be reported to the ADEQ Groundwater Protection Value Stream, within 30 days of the discovery of the condition. Upon review of the submitted report, the Department may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.
- c. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 5 and any specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to a PL being exceeded. To implement any other corrective action the permittee shall obtain prior approval from the ADEQ Groundwater Protection Value Stream according to Section 2.6.6.

#### 2.6.2.2 Exceedance of Alert Level #1 for Normal Liner Leakage

If an Alert Level #1 (AL #1) as specified in Section 4.1, Table 4.1-4, has been exceeded, the permittee shall take the following actions:

- Within 5 days of discovery, determine if the fluid in the collection sump is process water from the impoundment by measuring the pH and conductivity of fluids in the impoundment and in the sump to allow direct comparison of the fluids. Notify ADEQ Groundwater Protection Value Stream in accordance with Section 2.7.3(1) (Permit Violation and AL Status Reporting), and include in the notification an assessment of the type of water in the sump. Monitor fluid removal from the LCRS on a daily basis until the daily volume of fluid quantified remains below AL #1 for 30 days in order to minimize the hydraulic head on the lower liner.
- 2. Within 15 days of discovery, assess the condition of the liner system using visual methods for visible portions of the liner, electrical leak detection, or other methods as applicable to determine the location of leaks in the primary liner. If liner damage is evident, the permittee shall complete liner repairs and submit documentation of the repairs in the initial report discussed in Item No. 3 below.
- 3. Within 30 days of discovery of exceeding AL #1, the permittee shall submit an initial report to ADEQ Groundwater Protection Value Stream to address problems identified from the initial assessment of the liner system, the source of the fluid, and any remedial actions taken to minimize future occurrences. The report shall include the results of the initial liner evaluation, methods used to locate the leak(s) if applicable, any repair procedures implemented to restore the liner to optimal operational status if required, and other information necessary to ensure future occurrence of the incidence will be minimized. The permittee shall also submit the report required under Section 2.7.3.
- 4. For leakage rates that continue to exceed AL #1 and are below AL #2, a Liner Leakage Assessment Report shall be included in the next annual report described in Section 2.7.4 (Operational, Other or Miscellaneous Reporting) of this permit. The permittee may also submit the Liner Leakage Assessment Report to the ADEQ prior to the annual report due

- date. This Liner Leakage Assessment Report shall be submitted to the ADEQ Groundwater Protection Value Stream.
- 5. ADEQ will review the Liner Leakage Assessment Report and may require that the permittee take additional action to address the problems identified from the assessment of the liner and perform other applicable repair procedures as directed by the ADEQ, including repair of the liner or addressing and controlling infiltration of non-operational water detected in the LCRS.

#### 2.6.2.3 Exceedance of Alert Level #2 (Discharge Limit) for Liner Failure or Rips

If the Liner Leakage Discharge Limit (AL #2) specified in Section 4.1, Table 4.1-4, has been exceeded, the permittee shall:

- Immediately cease all discharge to the impoundment and notify ADEQ's Groundwater
  Protection Value Stream orally, electronically, or by facsimile of the AL #2 exceedance.
  Within 24 hours, determine if water in the collection sump is process water from the
  impoundment by measuring the pH and conductivity of fluids contained in the
  impoundment and in the sump to allow direct comparison of the fluids.
- 2. Within 5 days of discovery, notify ADEQ Groundwater Protection Value Stream, in accordance with Section 2.7.3 (Permit Violation and AL Status Reporting) and include an assessment regarding the type of water in the sump based upon the measurements taken according to Item No. 1 listed above.
- 3. Within 15 days of discovery, identify the location of the leak(s) using visual methods, electrical leak detection, or other methods as applicable. If liner damage is evident, the permittee shall complete liner repairs and submit documentation of the repairs in Item No. 4 below. Discharge to the impoundment shall not be re-initiated until the leak(s) has been identified and repaired.
- 4. Within 30 days of exceeding AL #2, submit a report to ADEQ as specified in Section 2.7.3 (Permit Violation and AL Status Reporting). The report shall include the results of the initial liner evaluation, methods used to locate the leak(s) if applicable, any repair procedures and quality assurance/quality control implemented to restore the liner to optimal operational status if required, and other information necessary to ensure future occurrence of the incidence will be minimized. Upon review of the report, ADEQ may request additional monitoring or remedial actions.
- 5. If AL #2 continues to be exceeded following completion of repairs, submit for approval to ADEQ, a corrective action plan including a schedule to complete the corrective actions to address all problems identified from the assessment of the liner system and surface releases, if any, within 60 days of completion of repairs conducted in response to Item No. 3 above. Upon ADEQ's approval, the permittee shall implement the approved plan and schedule of corrective actions.
- 6. Within 30 days of completion of corrective actions, submit to ADEQ, a written report as specified in Section 2.6.6 (Corrective Actions)

#### 2.6.2.4 Exceeding of Alert Levels in Groundwater Monitoring

Alert levels are listed in Attachment 15 for selected ISCR constituents for which numeric aquifer water quality standards have not been established. An exceedance of an AL for those constituents will be treated in the same manner as AL exceedances.

#### 2.6.2.4.1 Alert Levels for Indicator Parameters

- 1. If an AL in Section 4.1 Table 4.1-6, 4.1-6B, 4.1-7, or Table 4.1-7B has been exceeded, the permittee shall request that the laboratory verify the sample results within 5 days. If the analysis does not confirm that an exceedance has occurred, no further action is required.
- Within 5 days after receiving laboratory confirmation of an AL being exceeded, the
  permittee shall notify the ADEQ Groundwater Protection Value Stream and submit
  written confirmation within 30 days of receiving the laboratory confirmation of an AL
  exceedance.
- 3. If the results indicate an exceedance of an AL, the permittee shall conduct a verification sample of groundwater from the well within 15 days from laboratory confirmation. If the verification sample does not confirm that an exceedance has occurred, the permittee shall notify ADEQ Groundwater Protection Value Stream of the results. No further action is required under this subsection.
- 4. If verification sampling confirms that the AL has been exceeded, the permittee shall increase the frequency of monitoring to monthly and analyze for the entire list of parameters listed in Section 4.1, Table 4.1-6, or Table 4.1-6B, and increase the monitoring frequency to quarterly for parameters listed in Tables 4.1-7 or 4.1-7B. In addition, the permittee shall immediately investigate the cause of the exceedance and report the results of the investigation with the 30 day confirmation noted above. ADEQ may require additional investigations, the installation of additional wells, or corrective action in response to the report. The permittee shall continue monthly testing for the parameter(s) until the parameter(s) has remained below the AL for 3 consecutive monthly sampling events.

#### 2.6.2.4.2 Alert Levels for Pollutants with Numeric Aguifer Water Quality Standards

- 1. If an AL for a pollutant set in Section 4.1, Table 4.1-6, 4.1-6B, 4.1-7, or Table 4.1-7B has been exceeded, the permittee may conduct verification sampling of the pollutant(s) that exceed their respective AL(s) within 5 days of becoming aware of an AL exceedance. The permittee may use the results of another sample taken between the date of the last sampling event and the date of receiving the result as verification.
- 2. If verification sampling confirms the AL exceedance or if the permittee opts not to perform verification sampling, then the permittee shall increase the frequency of monitoring to monthly of the pollutant(s) that exceed their respective AL(s). In addition, the permittee shall immediately initiate an investigation of the cause of the AL exceedance, including inspection of all discharging facilities and all related pollution control devices, review of any operational and maintenance practices that might have

- resulted in an unexpected discharge, and hydrologic review of groundwater conditions including upgradient water quality from existing wells.
- 3. The permittee shall initiate actions identified in the approved contingency plan referenced in Section 3.0 and specific contingency measures identified in Section 2.6 to resolve any problems identified by the investigation which may have led to an AL exceedance. To implement any other corrective action the permittee shall obtain prior approval from ADEQ according to Section 2.6.6. Alternatively, the permittee may submit a technical demonstration, subject to written approval by the Groundwater Protection Value Stream, that although an AL is exceeded, the pollutant(s) that exceed their respective AL(s) are not reasonably expected to cause a violation of an AQL. The demonstration may propose a revised AL or monitoring frequency for approval in writing by the Groundwater Protection Value Stream.
- 4. Within 30 days after confirmation of an AL exceedance for those pollutant(s), the permittee shall submit the laboratory results to the Groundwater Protection Value Stream along with a summary of the findings of the investigation, the cause of the AL exceedance, and actions taken to resolve the problem.
- 5. Upon review of the submitted report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, or other actions.
- 6. The increased monitoring for those pollutant(s) required as a result of an AL exceedance may be reduced to the regularly scheduled frequency, if the results of three (3) sequential sampling events demonstrate that the parameter(s) does not exceed their respective AL(s).
- 7. If the increased monitoring required as a result of an AL exceedance for those pollutant(s) continues for more than six (6) sequential sampling events, the permittee shall submit a second report documenting an investigation of the continued AL exceedance within 30 days of the receipt of laboratory results of the sixth sampling event.

## 2.6.2.4.3 Alert Levels to Protect Downgradient Users from Pollutants Using a Narrative Aquifer Water Quality Standard

- 1. If an AL set for arsenic in Section 4.1, Table 4.1-6, or 4.1-7 has been exceeded, the permittee shall conduct verification sampling within 5 days of becoming aware of an AL exceedance.
- 2. If verification sampling confirms that the AL has been exceeded, the permittee shall investigate the cause of the exceedance and shall submit a report regarding the exceedance to ADEQ within 30 days of the date of verification sample. The report shall identify the cause and source(s) of the exceedance and shall propose actions to mitigate the exceedance. The report shall also present groundwater modeling to establish a projected relationship of the wells in which exceedance(s) were found and the downgradient boundary of the Arizona State Land Department property at the facility.

10

3. The permittee shall notify all downgradient users of the aquifer who may be directly affected by the discharge within 24 hours of receiving the results of verification confirmation sampling.

#### 2.6.2.5 Exceeding of BADCT Alert Levels for Injection/Recovery Well Operation

The permittee shall initiate the following actions within 24 hours of becoming aware of an AL exceedance listed in Section 4.1, Table 4.1-8 for the loss of hydraulic control within the in-situ leaching area for more than 24 consecutive hours. A loss of hydraulic control occurs when the amount of fluids injected during a 24 hour period exceeds the amount of fluid recovered for the same 24 hour period. Loss of hydraulic control is also indicated by a less than 1-foot differential observed in any pair of observation and recovery wells over a 24 hour period. The permittee shall:

- 1. Notify the ADEQ Groundwater Protection Value Stream within one (1) day of becoming aware of the AL exceedance;
- 2. Adjust flow rates at injection/recovery wells until the recovery volume is greater than the injected volume;
- Conduct an inspection, testing of piping and wellhead for leaks; injection and recovery lines, pumps, flow meters, totalizers, pressure gauges, pressure transducers, and other associated facilities;
- 4. Review of recent process logs, continuous chart recordings, meter readings, and other operational control information to identify any unusual occurrences;
- 5. Initiate pressure testing of the appropriate wells if the loss of fluids cannot be determined to be caused by a surface facility failure;
- 6. Repair system as necessary;
- 7. Within 1 week submit a report to ADEQ Groundwater Protection Value Stream. The report shall include but not be limited to providing the following information: a) injected volume in the period prior to the AL exceedance, b) recovered volume in the period prior to the AL exceedance, and c) corrective action taken.
- 8. The permittee is no longer considered to be in violation if the injection rate and recovery rates are re-established and maintained at normal operating conditions following the completion of the corrective actions.

If the exceedance of the AL is determined to be a result of a planned disruption or power outage, the cause will be noted in the logbook as required by Section 2.7.2.

If a leak is detected, operation of the well shall cease until the leak has been repaired and mechanical integrity demonstrated to minimize the potential for groundwater pollution.

Within 30 days of the initial AL exceedance caused by a leak, the permittee shall submit a report to ADEQ Groundwater Protection Value Stream at the address shown in Section 2.7.5. This report shall document all submittals to U.S. Environmental Protection Agency (USEPA), including

but not limited to, monitoring and report data and reports checking engineering and integrity of the well.

The facility is no longer on alert status once the operational indicator no longer indicates that an AL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

#### 2.6.2.6 Exceeding of Alert Levels Set for Maximum Injection Pressure

The permittee shall initiate the following actions within 24 hours of becoming aware of an AL exceedance listed in Section 4.1, Table 4.1-8 for the exceedance of a fracture gradient. The permittee shall:

- 1. Immediately investigate to determine the cause of the AL being exceeded, including:
  - Inspection, testing, and assessment of the current condition of all components of the injection system that may have contributed to the AL being exceeded, which may include taking the affected well(s) out of service;
  - b. Review of all data logger information, test results, and other operational control information to identify any unusual occurrences; and
  - c. Repair system as necessary.
- 2. Within 30 days of an AL being exceeded, the permittee shall submit the related data to the ADEQ Groundwater Protection Value Stream, along with a summary of the findings of the investigation, the cause of the AL being exceeded, and actions taken to resolve the problem. This report shall document all submittals to USEPA, including but not limited to, monitoring and report data, and reports checking engineering and integrity of the well.
- 3. Upon review of the submitted report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions or other actions.
- 4. The facility is no longer on alert status once the operational indicator no longer indicates that an AL is being exceeded. The permittee shall, however, complete all tasks necessary to return the facility to its pre-alert operating condition.

#### 2.6.2.7 Exceeding Alert Levels for Well Bore Electrical Conductivity

The permittee shall initiate the following actions within 24 hours of becoming aware of an AL exceedance listed in Section 4.1, Table 4.1-8 for the exceedance of Well Bore Electrical Conductivity. The permittee shall:

1. Verify the reading from the annular conductivity device to confirm there was an AL exceedance. If verification does not confirm an AL exceedance, the permittee can resume normal operations and notify the Groundwater Protection Value Stream in accordance with Section 2.7.3.

- If verification confirms an AL exceedance, the permittee shall notify the ADEQ
  Groundwater Protection Value Stream within one (1) day of becoming aware of the AL
  exceedance.
- 3. Increase Well Bore Electrical Conductivity monitoring required in Table 4.1-8 to monthly.
- 4. Repair system as necessary.
- 5. Within 30 days of repairing the system, the permittee shall submit a written report to the Groundwater Protection Value Stream documenting the repair of the system and providing an evaluation of the cause, impacts, or mitigation any impacts to the LBFU, middle fine-grained unit and/or upper basin fill unit.

#### 2.6.2.8 Exceeding Alert Levels for Fluid Electrical Conductivity

The permittee shall initiate the following actions within 24 hours of becoming aware of an AL exceedance listed in Section 4.1, Table 4.1-8 for the exceedance of fluid sample electrical conductivity. The permittee shall:

- 1. Immediately verify the fluid sample electrical conductivity. If the verification sample does not confirm that an exceedance has occurred, the permittee shall notify the ADEQ Groundwater Protection Value Stream of the results. No further action is required.
- Within 24-hours of confirmation of an AL being exceeded, the permittee shall notify the ADEQ Groundwater Protection Value Stream and immediately investigate the cause of the exceedance.
- 3. The permittee shall report the results of the investigation within 30 days of confirmation. ADEQ may require reduction of injection rates and increase of pumping rates, additional investigations, the installation of additional wells, or corrective action in response to the report.

#### 2.6.2.9 Exceeding an Alert Level for Cone of Depression

The permittee shall initiate the following actions within 24 hours of becoming aware of an Alert Level exceedance listed in Section 4.1, Table 4.1-8 for the cone of depression. The permittee shall:

- 1. Within 48 hours of becoming aware of the AL exceedance, verify whether an exceedance has occurred by completing the following:
  - a. Evaluate whether the data collection protocols have been properly followed.
  - b. Review field notes for indications of unusual circumstances that may have occurred during the collection of the data.
  - c. Review daily injection and pumping values at the ISCR well field at the time of the measurements to confirm that extraction was greater than injection during that period in accordance with Section 2.7.4.4(2), Table 4.1-1, and Table 4.1-8.
  - d. Evaluate the pumping conditions at other nearby wells during the time of

- measurements (i.e., were POC or other wells being purged).
- e. Inspect the equipment used to collect the field measurements.
- f. Determine if the measurement equipment was different from past collection periods and evaluate the potential effects of differences between the equipment used.
- g. Check the calibration of the equipment used (water sounder, pressure transducers, etc.).
- 2. If an exceedance is not verified, the permittee shall notify the ADEQ Groundwater Protection Value Stream of the results of the verification. No further action is required.
- 3. If an exceedance is verified, the permittee shall:
  - a. Reduce the injection rate and increase the pumping rate at the recovery wells to a rate that will cause the cone of depression to no longer exceed the AL and notify ADEQ Groundwater Protection Value Stream within 24 hours.
  - b. Increase the frequency of potentiometric surface map compilation to weekly until water level measurements confirm that the cone of depression AL is no longer exceeded.
  - c. If the cone of depression does not meet the AL after a period of 30 days of reduced injection and increased pumping, the permittee shall immediately cease injecting solutions, continue extracting until the cone of depression no longer exceeds the AL, increase the frequency of Level 1 monitoring to monthly, and increase the frequency of monitoring the Level 2 parameters to quarterly at all of the nearest down gradient POC wells. Upon taking these actions, the permittee shall notify ADEQ Groundwater Protection Value Stream within 3 days.
- 4. Once the AL is no longer exceeded, the permittee shall prepare a summary report to be submitted to the Groundwater Protection Value Stream within 30 days summarizing the findings and actions taken to extend the cone of depression to the Pollutant Management Area boundary.

#### 2.6.3 Discharge Limitations Violations

#### 2.6.3.1 Liner Failure, Containment Structure Failure, or Unexpected Loss of Fluid

In the event of overtopping, liner failure, containment structure failure, or unexpected loss of fluid as described in Section 2.3, the permittee shall take the following actions:

- 1. As soon as practicable, cease all discharges as necessary to prevent any further releases to the environment.
- 2. Within 24 hours of discovery, notify ADEQ Groundwater Protection Value Stream, orally, electronically, or by facsimile.
- 3. Within 24 hours of discovery of a failure that resulted in a release to the subsurface, collect representative samples of the fluid remaining in affected impoundments and drainage structures, analyze sample(s) according to Section 4.1, Table 4.1-2C and report

- in accordance with Section 2.7.3 (Permit Violation and AL Status Reporting). In the 30-day report required under Section 2.7.3, include a copy of the analytical results and forward the report to ADEQ Groundwater Protection Value Stream.
- 4. Within 15 days of discovery, initiate an evaluation to determine the cause for the incident. Identify the circumstances that resulted in the failure and assess the condition of the discharging facility and liner system. Implement corrective actions as necessary to resolve the problems identified in the evaluation. Initiate repairs to any failed liner, system, structure, or other component as needed to restore proper functioning of the discharging facility. The permittee shall not resume discharging to the discharging facility until repairs of any failed liner or structure are performed. Repair procedures, methods, and materials used to restore the system(s) to proper operating condition shall be described in the facility log/recordkeeping file and available for ADEQ review.
- 5. Record in the facility log/recordkeeping file the amount of fluid removed, a description of the removal method, and other disposal arrangements. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 (Operation Inspection/Log/Recordkeeping File).
- 6. Within 30 days of discovery of the incident, submit a report to ADEQ as specified in Section 2.7.3. Include a description of the actions performed in Subsections 1 through 5 listed above. Upon review of the report, ADEQ may request additional monitoring or remedial actions.
- 7. Within 60 days of discovery, conduct an assessment of the impacts to the subsoil and/or groundwater resulting from the incident. This assessment may include the installation of POC(s) to determine down-gradient groundwater impact from the incident along with commencement of groundwater monitoring per Section 4.1, Table 4.1-7. If soil or groundwater is impacted such that it could or did cause or contribute to an exceedance of an AQL at the applicable point of compliance, submit to ADEQ for approval, a corrective action plan to address such impacts, including identification of remedial actions and a schedule for completion of activities. At the approval of ADEQ, the permittee shall implement the approved plan.
- 8. Within 30 days of completion of corrective actions, submit to ADEQ, a written report as specified in Section 2.6.6 (Corrective Actions).
- 9. Upon review of the report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

#### 2.6.3.2 Overtopping of a Surface Impoundment

If overtopping of fluid from a permitted surface impoundment occurs, and results in an unauthorized discharge pursuant to A.R.S. § 49-201(12), the permittee shall:

- 1. As soon as practicable, cease all discharges to the surface impoundment to prevent any further releases to the environment.
- 2. Within 24 hours of discovery, notify ADEQ Groundwater Protection Value Stream.

- 3. Within 24 hours, collect representative samples of the fluid contained in the surface impoundment. Samples shall be analyzed for the parameters specified in Section 4.1, Table 4.1-2C. Within 30 days of the incident, submit a copy of the analytical results to ADEQ Groundwater Protection Value Stream.
- 4. As soon as practicable, remove and properly dispose of excess water in the impoundment until the water level is restored at or below the appropriate freeboard as described in Section 4.1, Table 4.1-3. Record in the facility log the amount of fluid removed, a description of the removal method, and the disposal arrangements. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 (Operation Inspection/Logbook/Recordkeeping File).
- 5. Within 30 days of discovery, evaluate the cause of the overtopping and identify the circumstances that resulted in the incident. Implement corrective actions and adjust operational conditions as necessary to resolve the problems identified in the evaluation. Repair any systems as necessary to prevent future occurrences of overtopping.
- 6. Within 30 days of discovery of overtopping, submit a report to ADEQ as specified in Section 2.7.3.2 (Permit Violation and Alert Level Status Reporting). Include a description of the actions performed in Subsections 1 through 5 listed above. Upon review of the report, ADEQ may request additional monitoring or remedial actions.
- 7. Within 60 days of discovery, and based on sampling in Subsection 3 above, conduct an assessment of the impacts to the subsoil and/or groundwater resulting from the incident.
- 8. If soil or groundwater is impacted such that it could cause or contribute to an exceedance of an AQL at the applicable point of compliance, submit to ADEQ for approval a corrective action plan to address such impacts, including identification of remedial actions and/or monitoring, and a schedule for completion of activities. At the direction of ADEQ, the permittee shall implement the approved plan.
- 9. Within 30 days of completion of corrective actions, submit to ADEQ a written report as specified in Section 2.6.6 (Corrective Actions). Upon review of the report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions.

#### 2.6.3.3 Inflows of Unexpected Materials to a Surface Impoundment

The types of materials that are expected to be placed in the permitted surface impoundments are specified in Section 2.3 (Discharge Limitations). If any unexpected materials flow to a permitted surface impoundment, the permittee shall:

- 1. As soon as practicable, cease all unexpected inflows to the surface impoundment(s).
- 2. Within 24-hours of discovery, notify ADEQ Groundwater Protection Value Stream.
- 3. Within five (5) days of the incident, identify the source of the material and determine the cause for the inflow. Characterize the unexpected material and contents of the affected impoundment, and evaluate the volume and concentration of the material to determine if it is compatible with the surface impoundment liner. Based on the

- evaluation of the incident, repair any systems or equipment and/or adjust operations as necessary to prevent future occurrences of inflows of unexpected materials.
- 4. Within 30 days of an inflow of unexpected materials, submit a report to ADEQ as specified in Section 2.7.3.2 (Permit Violation and Alert Level Status Reporting). Include a description of the actions performed in Subsections 1 through 3 listed above.
- 5. Upon review of the report, ADEQ may amend the permit to require additional monitoring, increased frequency of monitoring, amendments to permit conditions, or other actions including remediation.

#### 2.6.3.4 Unexpected Loss of Fluid in the Injection/Recovery Wells at the Well Field

In the event of an unexpected loss of fluid in the injection/recovery wells, such that there is an unauthorized discharge of fluids pursuant to A.R.S. § 49-201(12), the permittee shall:

- 1. Within 2 hours of discovery cease injection in the affected area and/or adjust flow rates at injection/recovery wells until an inward hydraulic gradient is reestablished and excess ISCR solutions are recovered necessary to prevent further releases to the environment.
- 2. Operate the recovery wells in the affected area until the amount of fluid recovered is in excess of the amount of fluid injected during the 24 hour period.
- 3. Within 24 hours of discovery, notify ADEQ Groundwater Protection Value Stream.
- 4. Inspect relevant components such as injection, recovery lines, pumps, flow meters, flow totalizers, pressure gauges, pressure transducers, and other associated facilities.
- 5. Verify proper operations of all facilities within the in-situ leach area.
- 6. Within 24 hours of discovery, initiate an evaluation to determine the cause for the incident. Identify the circumstances that resulted in the failure and assess the condition of the well. Implement corrective actions as necessary to resolve the problems identified in the evaluation. Initiate repairs to any system, structure, or other component as needed to restore proper functioning of the well. The permittee shall not resume injecting or discharging until repairs of any failed structure are performed and tested as applicable. Repair procedures, methods, and materials used to restore the system(s) to proper operating condition shall be described in the facility log/recordkeeping file and available for ADEQ review. The facility log/recordkeeping file shall be maintained according to Section 2.7.2 (Operation Inspection / Log / Recordkeeping File).
- 7. Submit a written report within 30 days to ADEQ as specified in Section 2.7.3 (Permit Violation and AL Status Reporting) describing the incident and the corrective actions taken. Upon review of the report, ADEQ may require an amendment to the permit to require surface, vadose zone or groundwater monitoring, require installation of additional POCs, increased frequency of monitoring, remedial actions, amendments to permit conditions, or other actions.
- 8. Within 30 days of discovery, conduct an assessment of the impacts to the surface, vadose zone and/or groundwater resulting from the incident. If soil or groundwater is

impacted, submit to ADEQ, for approval, a corrective action plan to address such impacts, including identification of remedial actions and/or monitoring, and a schedule for completion of activities. The corrective action plan shall be submitted within 60 days of the incident. At the direction of ADEQ, the permittee shall implement the approved plan.

#### 2.6.4 Aguifer Quality Limit Violation

- 1. If an AQL for a pollutant specified in Section 4.1, Table 4.1-6, and Table 4.1-7 is exceeded in a POC well, the permittee may conduct verification sampling for those pollutant(s) that were above their respective AQL(s) no later than five (5) days after learning of the violation. If verification sampling does not verify the violation, then the initial violation shall be reported in the Quarterly Monitoring and Compliance Report and no further action shall be required of the permittee for that event.
- 2. If verification sampling confirms the violation for those pollutant(s) that were above their respective AQL(s), or if the permittee opts not to perform verification sampling, then the permittee shall:
  - a. Notify ADEQ within five (5) days after confirming or learning of the violation, in accordance with Section 2.7.3;
  - b. Immediately initiate: (1) a BADCT systems evaluation for the cause of the violation, including an inspection of all facilities regulated under this permit and corresponding pollution control devices, and a review of any operational or maintenance practices that might have resulted in an unexpected discharge; and (2) a hydrogeologic assessment of the violation, including groundwater modeling, review of groundwater conditions and upgradient water quality, groundwater contours, and an inventory of downgradient well users and types of uses;
  - c. Increase the frequency of monitoring at the location of the violation to monthly for those pollutant(s) that exceeded their respective AQL(s);
  - d. Submit a written report based on the investigation within thirty (30) days after becoming aware of the violation, in accordance with Section 2.7.3; and
  - e. Take actions that may be necessary as a result of the violation under Section 2.6.5.
- 3. As part of its written report, the permittee may include a technical demonstration that the violation was not caused or contributed to by pollutants discharged from a facility regulated under this APP.
- 4. Based on the written report, ADEQ may, if necessary: (1) amend the permit to require increased frequency of monitoring or additional monitoring; and (2) authorize corrective action including measures to control the source of a discharge causing the violation (including BADCT correction if necessary); remediate affected soils, surface water or groundwater; and mitigate the impact of the violation on existing uses of the aquifer. ADEQ's corrective action authorization may be in the form of an approval under Section 2.6.6, an amendment of this permit or approval of a contingency plan.
- 5. If the violation continues for sixty (60) days, then the permittee shall notify downgradient or downstream users who may be directly affected by the violation.

6. If the violation continues for ninety (90) days, then the permittee shall prepare and submit for ADEQ approval a hydrogeologic investigation work plan within thirty (30) after receiving the laboratory results of the third sampling event. The work plan shall assess whether the violation is due to natural or anthropogenic causes and, if exceeded values are found to be related to APP-regulated facilities within the mine site or results are inconclusive, the nature and extent of the discharge. This hydrogeologic investigation shall become the basis of adjusting permit conditions and/or designing corrective action.

## 2.6.5 Emergency Response and Contingency Requirements for Unauthorized Discharges pursuant to A.R.S. §49-201(12) and pursuant to A.R.S. § 49-241

#### 2.6.5.1 Duty to Respond

The permittee shall act immediately to correct any condition resulting from a discharge pursuant to A.R.S. § 49-201(12) if that condition could pose an imminent and substantial endangerment to public health or the environment.

#### 2.6.5.2 Discharge of Hazardous Substances or Toxic Pollutants

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of suspected hazardous substances (A.R.S. § 49-201(19)) or toxic pollutants (A.R.S. § 49-243(I)) on the facility site, the permittee shall promptly isolate the area and attempt to identify the discharged material. The permittee shall record information, including name, nature of exposure, and follow-up medical treatment, if necessary, on persons who may have been exposed during the incident. The permittee shall notify the Groundwater Protection Value Stream within 24 hours upon discovering the discharge of hazardous material which (a) has the potential to cause an AQL to be exceeded, or (b) could pose an endangerment to public health or the environment.

#### 2.6.5.3 Discharge of Non-hazardous Materials

In the event of any unauthorized discharge pursuant to A.R.S. § 49-201(12) of non-hazardous materials from the facility, the permittee shall promptly attempt to cease the discharge and isolate the discharged material. Discharged material shall be removed and the site cleaned up as soon as possible. The permittee shall notify the ADEQ Groundwater Protection Value Stream within 24 hours upon discovering the discharge of non-hazardous material which (a) has the potential to cause an AQL to be exceeded, or (b) could pose an endangerment to public health or the environment.

#### 2.6.5.4 Reporting Requirements

The permittee shall submit a written report for any unauthorized discharges reported under Sections 2.6.5.2 and 2.6.5.3 to ADEQ Groundwater Protection Value Stream within 30 days of the discharge or as required by subsequent ADEQ action. The report shall summarize the event, including any human exposure and facility response activities, and include all information specified in Section 2.7.3. If a notice is issued by ADEQ subsequent to the discharge notification,

any additional information requested in the notice shall also be submitted within the time frame specified in that notice. Upon review of the submitted report, ADEQ may require additional monitoring or corrective actions.

#### 2.6.6 Corrective Actions

Specific contingency measures identified in Section 2.6 and actions identified in the approved contingency plan to be submitted under the Compliance Schedule Section 3.0 have already been approved by ADEQ and do not require written approval to implement.

With the exception of emergency response actions taken under Section 2.6.5, the permittee shall obtain written approval from the Groundwater Protection Value Stream prior to implementing a corrective action to accomplish any of the following goals in response to exceeding an AL or violation of an AQL, DL, or other permit condition:

- 1. Control of the source of an unauthorized discharge;
- 2. Soil cleanup;
- 3. Cleanup of affected surface waters;
- 4. Cleanup of affected parts of the aquifer; and/or
- 5. Mitigation to limit the impact of pollutants on existing uses of the aquifer.

Within 30 days of completion of any corrective action, the permittee shall submit to the ADEQ Groundwater Protection Value Stream a written report describing the causes, impacts, and actions taken to resolve the problem.

### **EXHIBIT D-7**

Discharge Limitations, Monitoring Requirements, and Alert Levels (Revised March 19, 2021)

### **Table of Contents**

1.1	Introd	duction	2
1.2	Discha	arge Limitations	2
1.3	Monit	toring Activities	2
	1.3.1	Monitoring and Analytical Requirements	2
	1.3.2	Groundwater Monitoring Sampling Protocols	
	1.3.3	Existing ALs and AQLs	
	1.3.4	New ALs and AQLs	
	1.3.5	Replacement Monitoring Wells	
	1.3.6	Compliance Monitoring	
	1.3.7	Facility/Operational Monitoring	
1.4	Temp	orary Cessation	5

Page

**Appendix 1** – Monitoring Tables

#### 1.1 Introduction

Florence Copper Inc. (Florence Copper) has prepared this document to provide information regarding proposed discharge limitations, monitoring requirements, alert levels (AL), compliance schedules, and temporary cessation or related plans. Accordingly, this document includes information that describes discharge limitations, monitoring requirements, ALs, compliance schedules, and temporary cessation plans proposed by Florence Copper.

#### 1.2 Discharge Limitations

Florence Copper proposes the following discharge limitations:

- 1. The permittee shall operate and maintain all permitted facilities to prevent unauthorized discharges pursuant to Arizona Revised Statutes § 49-201(12) resulting from failure or bypassing of Best Available Demonstrated Control Technology pollutant control technologies including liner failure, uncontrollable leakage, berm breaches that result in an unexpected loss of fluid, accidental spills, or other unauthorized discharges. Liner failure in a single-lined impoundment is any condition that would result in leakage exceeding 550 gallons per day per acre of the impoundment.
- 2. Injection of lixiviant will not be conducted until all core holes and wells within 500 feet of an injection or recovery well located in the In-Situ Copper Recovery wellfield have been abandoned in accordance with the Plugging and Abandonment Plan included as Attachment E of the Underground Injection Control (UIC) Permit application.
- 3. Florence Copper will initiate contingency actions identified in Aquifer Protection Permit (APP) No. P-101704 if process solution sampling data show that the polynuclear aromatic hydrocarbon concentration in the lixiviant exceeds 20 milligrams per liter (mg/L) in any monthly sample, or 10 mg/L as a quarterly average.

#### 1.3 Monitoring Activities

This section describes monitoring activities that are designed to provide an early detection and prompt response to any condition that might result in an unauthorized discharge to an aquifer or to the vadose zone, or that might cause a violation of an Aquifer Water Quality Standard (AWQS) at a Point of Compliance (POC) well, or cause concentrations of discharge constituents to increase at a POC well if the pre-operational concentrations of those constituents exceed AWQS. The activities include groundwater and facility/operational monitoring.

#### 1.3.1 Monitoring and Analytical Requirements

All monitoring required under the APP and UIC permits will continue for the duration of the permits except as conducted in accordance with a temporary cessation plan approved by the U.S. Environmental Protection Agency (USEPA) and the Arizona Department of Environmental Quality (ADEQ). All sampling, preservation, and holding times will be in accordance with currently accepted standards of professional practice. Trip blanks, equipment blanks, and duplicate samples will also be obtained and chain-of-custody procedures will be followed, in accordance with currently accepted standards of professional practice. Florence Copper will consult with the USEPA Code of Federal Regulations for guidance in this regard. Copies of laboratory analyses and chain-of-custody forms will be maintained at the permitted facility. Upon request, these documents will be made immediately available for review by the USEPA and ADEQ personnel.

All samples collected for compliance monitoring at the POC wells will be analyzed using Arizona and USEPA approved methods. Regardless of the method used, the detection limits will be sufficient to determine compliance with the regulatory limits of the parameters specified in the UIC Permit. Analyses will be performed by a laboratory licensed by the Arizona Department of Health Services, Office of Laboratory Licensure and Certification. For results to be considered valid, all analytical work will meet quality control standards specified in the approved methods. A list of Arizona state-certified laboratories can be obtained at the address below:

Arizona Department of Health Services
Office of Laboratory Licensure and Certification
150 North 18 Avenue
Phoenix, AZ 85007

Phone: (602) 542-1025

Monitoring equipment required by the APP and UIC permits will be installed and maintained so that representative samples required by the permits can be collected. If new groundwater wells are determined to be necessary, the construction details will be submitted to the USEPA and ADEQ for approval prior to installation, and the APP and the UIC Permit shall be amended to include any new monitoring points.

#### 1.3.2 Groundwater Monitoring Sampling Protocols

The following describes the protocols that will be used for the collection and analysis of groundwater samples collected from the designated POC wells listed in Tables 13 and 14 of APP No. P-101704, fault monitoring wells, Underground Source of Drinking Water (USDW) monitoring wells, and annular conductivity device (ACD) demonstration wells listed on Tables 13.1 and 14.1 provided with this Exhibit. Tables 13, 13.1. 14, and 14.1 are included in Appendix 1 of this Exhibit.

The protocols will be used for collecting and analyzing samples from POC wells for which ALs and Aquifer Quality Limits (AQL) have been established, and for collecting and analyzing groundwater samples for the purpose of developing groundwater quality data needed for the establishment of ALs and AQLs. ALs and/or AQLs have been previously established for all of the POC wells listed in Tables 13 and 14, except replacement wells M32-UBF and M33-UBF. ALs and AQLs have not yet been established for the fault monitoring wells, USDW monitoring wells, and ACD demonstration wells listed in Tables 13.1 and 14.1.

Static water levels will be measured and recorded prior to sampling. Wells will be purged of at least three borehole volumes (as calculated using the static water level) or until field parameters (pH, temperature, and conductivity) are stable, whichever represents the greater volume. If evacuation results in the well going dry, the well will be allowed to recover to 80 percent of the original borehole volume, or for 24 hours, whichever is shorter, prior to sampling. If after 24 hours there is not sufficient water for sampling, the well will be recorded as "dry" for the monitoring event. An explanation for reduced pumping volumes, a record of the volume pumped, and modified sampling procedures will be reported and submitted with the quarterly report.

Florence Copper may conduct the sampling using the low-flow purging method as described in the Arizona Department of Water Resources Research Center, March 1995 Field Manual for Water Quality Sampling. If the low-flow sampling method is used, the well will be purged until indicator parameters

stabilize. Indicator parameters will include dissolved oxygen, turbidity, pH, temperature, and conductivity.

#### 1.3.3 Existing ALs and AQLs

Tables 13, 13.1, 14, and 14.1 (Appendix 1) list parameters that are to be monitored quarterly and annually at each POC well during the period of the permit. ALs and/or AQLs have been previously established for all of the POC wells listed in Tables 13 and 14, except replacement wells M32-UBF and M33-UBF. Florence Copper will use the procedure set forth in APP No. P-101704 to calculate the ALs and/or AQLs for POC wells M32-UBF, M33-UBF, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells listed in Tables 13.1 and 14.1. The locations of each of the POC wells, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells are provided in Table D-7.1.

#### 1.3.4 New ALs and AQLs

New ALs and AQLs will be established and calculated using the method set forth in APP No. P-101704. The procedure is provided below.

#### 1.3.4.1 New ALs

ALs shall be calculated for all contaminants with an established numeric AWQS for any new or replacement POC wells, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells unless otherwise specified in the APP or UIC Permit.

The permittee shall submit the ambient groundwater data in tabulated form to the ADEQ and USEPA for review. Copies of all laboratory analytical reports, field notes, and the Quality Assurance/Quality Control (QA/QC) procedures used in collection and analyses of the samples for all parameters listed in Tables 13, 13.1, 14, and 14.1 to be established for each POC well, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells shall be submitted to the ADEQ and USEPA. The permittee may submit a report with the calculations for each AL and AQL included in the permit for review and approval by the ADEQ and USEPA, or the permittee may defer calculation of the ALs and AQLs by the ADEQ. The ALs shall be established and calculated following acceptable statistical guidance such as the USEPA Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Unified Guidance (EPA 530-R-09-007).

The following criteria shall be met in establishing ALs in the permit:

- 1. The AL shall be calculated for a parameter using the analyses from a minimum of eight sampling events.
- 2. Any data where the laboratory Practical Quantitation Limit (PQL) exceeds 80 percent of the AWQS shall not be included in the AL calculation.
- 3. If a parameter is below the detection limit, the permittee must report the value as "less than" the numeric value for the PQL or detection limit for the parameter, not just as "non-detect." For those parameters, the permittee shall use a value of one-half the reported detection limit for the AL calculation.
- 4. If the analytical results from more than 50 percent of the samples for a specific parameter are non-detect, then the AL shall be set at 80 percent of the AWQS.

5. If the calculated AL for a specific constituent and well is less than 80 percent of the AWQS, the AL shall be set at 80 percent of the AWQS for that constituent in that well.

#### 1.3.4.2 New AQLs

For each of the monitored analytes for which a numeric AWQS has been adopted, the AQL shall be established as follows:

- If the calculated AL is less than the AWQS, then the AQL shall be set equal to the AWQS.
- 2. If the calculated AL is greater than the AWQS, then the AQL shall be set equal to the calculated AL value, and no AL shall be set for that constituent at that monitoring point.

#### 1.3.5 Replacement Monitoring Wells

In the event that one or more of the designated POC wells, fault monitoring wells, USDW monitoring wells, and ACD demonstration wells should become unusable or inaccessible due to damage or any other event, a replacement well will be constructed and installed upon approval by the USEPA and ADEQ. If the replacement well is 50 feet or less from the original well, the ALs and/or AQLs calculated for the designated POC well will apply to the replacement well.

#### 1.3.6 Compliance Monitoring

Florence Copper will begin compliance monitoring at the designated POC wells once applicable ALs and/or AQLs have been established. Florence Copper will continue to monitor each well listed in Tables 13, 13.1, 14, and 14.1 in accordance with the parameters and frequencies listed in those Tables. If monitoring indicates that an AL or AQL have been exceeded, Florence Copper will follow the requirements outlined in Section 2.6.2.5 of APP No. P-101704, and applicable sections of the UIC Permit. The results of compliance monitoring will be documented and submitted with the quarterly report to the USEPA and ADEQ.

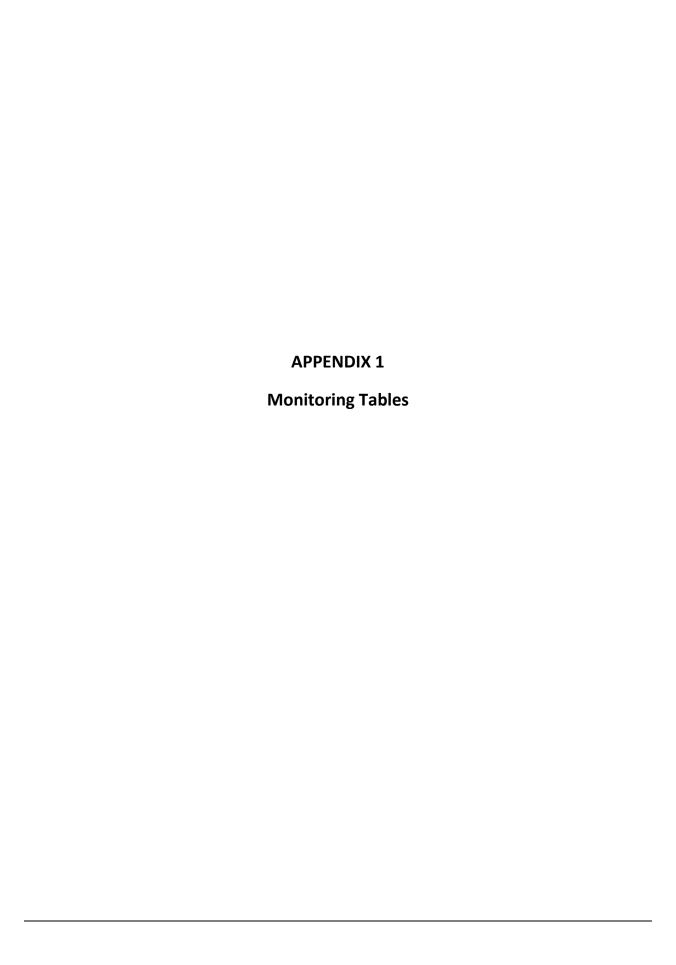
#### 1.3.7 Facility/Operational Monitoring

#### 1.3.7.1 Facility Monitoring

Exhibit D-2 of Attachment D (Operations Plan) of the UIC Application lists facility components that will be monitored to maintain normal operations. Many of the components listed will be equipped with electronic monitors and automatic shutoffs. Conditions requiring initiation of the contingency plan are described in Exhibit D-2 of Attachment D of this Application.

#### 1.4 Temporary Cessation

Florence Copper will give written notice to the USEPA and ADEQ before ceasing operation of the facility for a period of 60 days or greater. At the time of notification, Florence Copper will submit for USEPA and ADEQ approval a plan for maintenance of discharge control systems and for monitoring during the period of temporary cessation. Immediately following USEPA and ADEQ approval, Florence Copper will implement the approved plan. If necessary, the USEPA and ADEQ will amend the APP and UIC permits conditions to incorporate conditions to address temporary cessation. During the period of temporary cessation, Florence Copper will provide written notice to the USEPA and ADEQ of the operational status of the facility every 2 years. If Florence Copper intends to permanently cease operation of any facility, Florence Copper will submit written notification of closure to the USEPA and ADEQ in accordance with permit conditions.



## TABLE D-7.1 WELL LOCATIONS

FLORENCE COPPER INC. FLORENCE, ARIZONA

Well Name	Well Type	Latitude	Longitude
M66-UBF	USDW Monitoring Well	33.04543959	-111.4358553
M67-LBF	USDW Monitoring Well	33.04563265	-111.4359356
M68-LBF	USDW Monitoring Well	33.04853376	-111.4363396
M69-UBF	USDW Monitoring Well	33.04866895	-111.436342
M70-LBF	USDW Monitoring Well	33.05266331	-111.4366228
M71-UBF	USDW Monitoring Well	33.05281577	-111.4366078
M72-UBF	ACD Demonstration Well	33.05086431	-111.4347419
M73-LBF	ACD Demonstration Well	33.05086351	-111.4345365
M62-LBF	Fault Monitoring Well	33.05434192	-111.433434
M63-LBF	Fault Monitoring Well	33.05390093	-111.4273522
M64-LBF	Fault Monitoring Well	33.04915383	-111.4246236
M65-LBF	Fault Monitoring Well	33.04398948	-111.4310261
M75-UBF	Fault Monitoring Well	33.04926807	-111.4247445
M74-0	Fault Monitoring Well	33.04903477	-111.4244877
M77-UBF	Fault Monitoring Well	33.04421236	-111.4310539
M76-O	Fault Monitoring Well	33.04383021	-111.431056
M52-UBF	Point of Compliance Well	33.05292796	-111.4235828
M7-GL	Point of Compliance Well	33.0541719	-111.4367234
M8-O	Point of Compliance Well	33.05415471	-111.4369024
M3-GL	Point of Compliance Well	33.04350051	-111.42248
M4-O	Point of Compliance Well	33.04354048	-111.4225521
M1-GL	Point of Compliance Well	33.04392337	-111.432538
M18-GU	Point of Compliance Well	33.0439299	-111.4327246
M15-GU	Point of Compliance Well	33.05111382	-111.4379257
M2-GU	Point of Compliance Well	33.04363807	-111.4223873
M6-GU	Point of Compliance Well	33.05424399	-111.4367902
019-GL	Point of Compliance Well	33.05367077	-111.4336038
P19-1-0	Point of Compliance Well	33.05359733	-111.4331701
M14-GL	Point of Compliance Well	33.05111101	-111.4377726
P49-O	Point of Compliance Well	33.04507134	-111.4355847
M21-UBF	Point of Compliance Well	33.05351268	-111.4312728
M23-UBF	Point of Compliance Well	33.05130893	-111.4377835
M25-UBF	Point of Compliance Well	33.04839948	-111.4375655
M30-O	Point of Compliance Well	33.05357994	-111.428885
M27-LBF	Point of Compliance Well	33.05447667	-111.4352545
M19-LBF	Point of Compliance Well	33.05360667	-111.4312012
M29-UBF	Point of Compliance Well	33.05459845	-111.4350118
M22-O	Point of Compliance Well	33.051273	-111.4376374
M24-O	Point of Compliance Well	33.04829271	-111.4375855
M26-O	Point of Compliance Well	33.05445396	-111.4350427
M28-LBF	Point of Compliance Well	33.0546082	-111.4351729
M31-LBF	Point of Compliance Well	33.05356137	-111.4290361
M17-GL	Point of Compliance Well	33.0471846	-111.4375671
M16-GU(R)	Point of Compliance Well	33.04730129	-111.4373254
O49-GL(R)	Point of Compliance Well	33.04505778	-111.4362073
M20-O	Point of Compliance Well	33.05361718	-111.4313524
M33-UBF	Point of Compliance Well	33.05202471	-111.4176937
M32-UBF	Point of Compliance Well	33.04839792	-111.4195207



FLORENCE COPPER INC. FLORENCE, ARIZONA

Parameter	M1	-GL	M2	-GU	M3	-GL	M	4-0	M6	-GU	M7	-GL	M	3-0	M14	4-GL	M1!	5-GU
	AQL (mg/L)	AL (mg/L)	AQL (mg/L)	AL (mg/Ll)	AQL (mg/L)	AL (mg/L)												
Depth to Groundwater (ft. bgs)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Water Level Elevation (ft amsl)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Indicator Parameters':				•				-		-						-		
pH (field) (S.U.)	Monitor <sup>2</sup>	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Specific Conductance (field) (mhos/cm)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Temperature (field)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Fluoride	4.0	3.2	4.0	3.2	4.0	3.2	5.1	Monitor	4.0	3.2	4.0	3.2	4.0	3.6	4.0	3.2	4.0	3.2
Magnesium	NE <sup>3</sup>	31	NE	39	NE	36	NE	15	NE	44	NE	1.0	NE	1	NE	23	NE	21
Sulfate	NE	184.2	NE	275	NE	187	NE	405	NE	86	NE	82	NE	122	NE	144	NE	89
Total dissolved solids	NE	1028	NE	1496	NE	1157	NE	1072	NE	620	NE	464	NE	609	NE	874	NE	794



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

<sup>&</sup>lt;sup>2</sup> Monitor = Monitoring required, but no aquifer quality limit (AQL) or alert level (AL) will be established in the permit.

<sup>&</sup>lt;sup>3</sup> NE = Not Established

<sup>&</sup>lt;sup>4</sup> Reserved - AQL/Als pending ambient monitoring being performed per Section 2.5.3.2 and the CSI requirements. mhos/cm = millimhos per centimeter amsl = above mean sea level bgs = below ground surface mg/L = milligrams per liter S.U. = standard unit

FLORENCE COPPER INC. FLORENCE, ARIZONA

Parameter	M16-	GU(R)	M1	7-GL	M18	3-GU	M19	)-LBF	M20-	-O (R)	M21	-UBF	M2	2-0	M23	-UBF	M2	24-0
	AQL (mg/L)	AL (mg/L)																
Depth to Groundwater (ft. bgs)	Monitor	Monitor																
Water Level Elevation (ft amsl)	Monitor	Monitor																
Indicator Parameters':				-		-		-		-						-		
pH (field) (S.U.)	Monitor	Monitor																
Specific Conductance (field) (mhos/cm)	Monitor	Monitor																
Temperature (field)	Monitor	Monitor																
Fluoride	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2
Magnesium	NE	14	NE	9.3	NE	8.6	NE	21	NE	14	NE	87	NE	8.6	NE	69	NE	19
Sulfate	NE	112	NE	209	NE	86	NE	89	NE	112	NE	487	NE	86	NE	411	NE	1364
Total dissolved solids	NE	809	NE	831	NE	1094	NE	794	NE	809	NE	2867	NE	1094	NE	2392	NE	2363



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

<sup>&</sup>lt;sup>2</sup> Monitor = Monitoring required, but no aquifer quality limit (AQL) or alert level (AL) will be established in the permit.

<sup>&</sup>lt;sup>3</sup> NE = Not Established

<sup>&</sup>lt;sup>4</sup> Reserved - AQL/Als pending ambient monitoring being performed per Section 2.5.3.2 and the CSI requirements. mhos/cm = millimhos per centimeter amsl = above mean sea level bgs = below ground surface mg/L = milligrams per liter S.U. = standard unit

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Parameter	M25	-UBF	M2	6-0	M27	7-LBF	M28	3-LBF	M29	-UBF	M3	0-0	M31	-UBF	019	)-GL	O49-	-GL(R)
	AQL (mg/L)	AL (mg/L)																
Depth to Groundwater (ft. bgs)	Monitor	Monitor																
Water Level Elevation (ft amsl)	Monitor	Monitor																
Indicator Parameters':				-		•		-										
pH (field) (S.U.)	Monitor	Monitor																
Specific Conductance (field) (mhos/cm)	Monitor	Monitor																
Temperature (field)	Monitor	Monitor																
Fluoride	4.0	3.2	4.0	3.4	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2
Magnesium	NE	76	NE	1.0	NE	51	NE	2.6	NE	84	NE	18	NE	NE	NE	17	NE	18
Sulfate	NE	387	NE	105	NE	179	NE	81	NE	456	NE	102	NE	330	NE	99	NE	181
Total dissolved solids	NE	2683	NE	556	NE	1745	NE	610	NE	2751	NE	824	NE	NE	NE	770	NE	849



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

<sup>&</sup>lt;sup>2</sup> Monitor = Monitoring required, but no aquifer quality limit (AQL) or alert level (AL) will be established in the permit.

<sup>&</sup>lt;sup>3</sup> NE = Not Established

<sup>&</sup>lt;sup>4</sup> Reserved - AQL/Als pending ambient monitoring being performed per Section 2.5.3.2 and the CSI requirements. mhos/cm = millimhos per centimeter amsl = above mean sea level bgs = below ground surface mg/L = milligrams per liter S.U. = standard unit

FLORENCE COPPER INC. FLORENCE, ARIZONA

Parameter	P19	-1-0	P49	9-0	(M32	-UBF -UBF ement)	M54	-LBF	M5	4-0	M33 (replac	-UBF ement)
	AQL (mg/L)	AL (mg/L)	AQL (mg/L)	AL (mg/L)	AQL (mg/L)	AL (mg/L)	AQL (mg/L)	AL (mg/L)	AQL (mg/L)	AL (mg/L)	AQL (mg/L)	AL (mg/L)
Depth to Groundwater (ft. bgs)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Water Level Elevation (ft amsl)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Indicator Parameters¹:												
pH (field) (S.U.)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Specific Conductance (field) (mhos/cm)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Temperature (field)	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Fluoride	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	4.0	3.2	Reserved <sup>4</sup>	Reserved
Magnesium	NE	23	NE	6.2	NE	45	NE	46.0	NE	11	Reserved	Reserved
Sulfate	NE	144	NE	181	NE	351	NE	329	NE	200	Reserved	Reserved
Total dissolved solids	NE	874	NE	801	NE	1666	NE	1731	NE	855	Reserved	Reserved



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

<sup>&</sup>lt;sup>2</sup> Monitor = Monitoring required, but no aquifer quality limit (AQL) or alert level (AL) will be established in the permit.

<sup>&</sup>lt;sup>3</sup> NE = Not Established

<sup>&</sup>lt;sup>4</sup> Reserved - AQL/Als pending ambient monitoring being performed per Section 2.5.3.2 and the CSI requirements. mhos/cm = millimhos per centimeter amsl = above mean sea level bgs = below ground surface mg/L = milligrams per liter S.U. = standard unit

т	able 13.1. Quart	erly Groundwate	r Compliance M	onitoring at Supp	olemental Monito	ring Wells		
Parameter		-UBF nitoring Well)	-	-LBF nitoring Well)		-LBF nitoring Well)		-UBF nitoring Well)
	AQL	AL	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Depth to Groundwater (ft. bgs)	$TBD^1$	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Water Level Elevation (ft amsl)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Indicator Parameters:	155	122	155	155	155	155	155	155
pH (field) (S.U.)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Specific Conductance (field) (mhos/cm)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Temperature (field)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Fluoride	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Magnesium	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Sulfate	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total dissolved solids	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
	3.550	T DE	3.55	LIDE	1 1570	LIDE	1.550	IDE
Parameter		-LBF nitoring Well)		-UBF nitoring Well)		-UBF estration Well)		-LBF stration Well)
	AQL	AL	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Depth to Groundwater (ft. bgs)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Water Level Elevation (ft amsl)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Indicator Parameters:								
pH (field) (S.U.)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Specific Conductance (field) (mhos/cm)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Temperature (field)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Fluoride	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Magnesium	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Sulfate	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total dissolved solids	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
			1		T		T	
Parameter		-LBF itoring Well)		-LBF itoring Well)	1	-LBF itoring Well)		-LBF itoring Well)
	<u> </u>	AL	AOL	AL		AL	AQL	AL
	AQL (mg/L)				AQL (mg/L)	(mg/L)	~	(mg/L)
Depth to Groundwater (ft. bgs)	TBD	(mg/L) TBD	(mg/L) TBD	(mg/L) TBD	TBD	TBD	(mg/L) TBD	(mg/L) TBD
Water Level Elevation (ft amsl)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Indicator Parameters:	IBD	IBD	IDD	IBD	IBD	IBD	IBD	IBD
pH (field) (S.U.)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Specific Conductance (field) (mhos/cm)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Temperature (field)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Fluoride	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Magnesium	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Sulfate	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total dissolved solids	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total dissolved solids	IBD	TDD	TDD	TDD	TBD	TDD	TDD	TDD
_	M75	-UBF	M7	74-0	M77	-UBF	M7	(6-O
Parameter	(Fault Mon	itoring Well)	(Fault Mon	itoring Well)	(Fault Mon	itoring Well)	(Fault Mon	itoring Well)
	AQL	AL	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
Depth to Groundwater (ft. bgs)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Water Level Elevation (ft amsl)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Indicator Parameters:								
pH (field) (S.U.)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Specific Conductance (field) (mhos/cm)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Temperature (field)	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Fluoride	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Magnesium	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Sulfate	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD
Total dissolved solids	TBD	TBD	TBD	TBD	TBD	TBD	TBD	TBD

Notes:

ACD = annular conductivity device
AL = alert level
AQL = Aquifer Quality Limits
ft. amsl = feet above mean sea level
ft. bgs = feet below ground surface
mg/L = milligrams per liter
mhos/cm = microsiemens per centimeter
S.U. = standard unit
TBD = To Be Determined
USDW = Underground Source of Drinking Water

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Parameter <sup>1</sup>	M1	-GL	M2	-GU	МЗ	-GL	M4	I-O	M6	-GU	M7	'-GL	M	8-0	M1	1-GL	M15	5-GU
	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
pH (lab)	Monitor <sup>2</sup>	Monitor																
Bicarbonate	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Calcium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Carbonate	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Chloride	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Nitrate as nitrogen <sup>3</sup>	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Potassium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Sodium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Cation/anion balance	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Aluminum	Monitor	0.71	Monitor	0.71	Monitor	0.71	Monitor	0.71	Monitor	0.71	Monitor	0.71	NE	0.71	NE	0.71	NE	0.71
Antimony	0.006	0.005	0.016	Monitor	0.006	0.005	0.006	0.005	0.006	0.005	0.006	0.005	0.006	0.005	0.016	NE	0.016	NE
Arsenic	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026
Barium	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6
Beryllium	0.004	0.0032	0.0053	Monitor	0.0053	Monitor	0.0053	NE	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032
Cadmium	0.005	Monitor	0.040	Monitor	0.005	Monitor	0.040	NE	0.005	0.004	0.040	NE	0.005	0.004	0.005	0.004	0.04	NE
Chromium (total)	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Cobalt	NE <sup>4</sup>	0.005	NE	0.005														
Copper	NE	0.51	NE	0.51	NE	0.51	NE	0.51	NE	0.51	NE	0.51	NE	0.8	NE	0.8	NE	0.8
Iron	NE	2.2	NE	2.2	NE	2.2	NE	2.2	NE	2.2	NE	2.2	NE	2.2	NE	2.2	NE	2.2
Lead	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.04	0.05	0.04	0.05	0.04
Manganese	NE	0.22	NE	0.22	NE	0.22	NE	0.22	NE	0.22	NE	0.22	NE	0.22	NE	0.22	NE	0.22
Mercury	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0011	0.002	0.0011	0.002	0.0011	0.002	0.0016	0.002	0.0016	0.002	0.0016
Nickel	0.13	NE	0.13	NE	0.13	NE	0.10	0.08	0.10	0.08	0.13	NE	0.1	0.08	0.13	NE	0.13	NE
Selenium	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.027	0.05	0.027	0.05	0.027	0.05	0.04	0.05	0.04	0.05	0.04
Thallium	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Zinc	NE	2.5	NE	2.5	NE	2.5	NE	2.5	NE	2.5	NE	2.5	NE	4	NE	4	NE	4
Gross Alpha	NE	15	NE	15	NE	1	NE	15	NE	1								
Adjusted Gross Alpha (pCi/L) <sup>5</sup>	15	12	15	12	15	12	15	12	15	12	15	12	15	12	15	12	15	12
Radium 226 + 228 (pCi/L)	5	4	5	4	5	4	5	Monitor	5	4	5	4	5	4	5	4	5	4
Total Uranium Isotopes (pCi/L) <sup>6</sup>	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Total Uranium	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Total petroleum hydrocarbons- diesel	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Benzene	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004
Ethylbenzene	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56
Toluene	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
Total Xylene	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

 $<sup>^{2}</sup>$  Monitor = Monitoring required, but no AQL or AL will be established in the permit.

<sup>&</sup>lt;sup>3</sup> Nitrate will be used only for calculation of cation/anion balance because of regional nitrate pollution and none used in processes.

<sup>&</sup>lt;sup>4</sup> NE = Not Established

<sup>&</sup>lt;sup>5</sup> If the gross alpha particle activity is greater than the AL or AQL, then calculate the adjusted gross alpha particle activity. The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).

 $<sup>^{\</sup>rm 6}$  Uranium Isotope activity results must be used for calculating Adjusted Gross Alpha.

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Parameter <sup>1</sup>	M16-	GU(R)	M17	7-GL	M18	3-GU	M19	-LBF	M20	-O(R)	M21	-UBF	M2	2-0	M23	-UBF	M2	24-0
	AQL	AL																
	(mg/L)																	
pH (lab)	Monitor																	
Bicarbonate	Monitor																	
Calcium	Monitor																	
Carbonate	Monitor																	
Chloride	Monitor																	
Nitrate as nitrogen <sup>3</sup>	Monitor																	
Potassium	Monitor																	
Sodium	Monitor																	
Cation/anion balance	Monitor																	
Aluminum	NE	0.71																
Antimony	0.006	0.005	0.016	NE	0.016	NE	0.006	0.005	0.006	0.005	0.016	NE	0.016	NE	0.006	0.005	0.006	0.005
Arsenic	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026
Barium	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6
Beryllium	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032
Cadmium	0.04	NE	0.005	0.004	0.04	NE	0.005	0.004	0.04	NE	0.04	NE	0.04	NE	0.04	NE	0.005	0.004
Chromium (total)	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Cobalt	NE	0.005																
Copper	NE	0.8																
Iron	NE	2.2																
Lead	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Manganese	NE	0.22																
Mercury	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Nickel	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08
Selenium	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Thallium	0.002	0.0016	0.024	NE	0.002	0.0016	0.024	NE	0.002	0.0016								
Zinc	NE	4																
Gross Alpha	NE	15																
Adjusted Gross Alpha (pCi/L) <sup>5</sup>	15	12	15	12	15	12	15	12	15	12	15	12	15	12	15	12	15	12
Radium 226 + 228 (pCi/L)	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4
Total Uranium Isotopes (pCi/L) <sup>6</sup>	Monitor																	
Total Uranium	Monitor																	
Total petroleum hydrocarbons- diesel	Monitor																	
Benzene	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004
Ethylbenzene	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56
Toluene	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
Total Xylene	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

 $<sup>^{2}</sup>$  Monitor = Monitoring required, but no AQL or AL will be established in the permit.

<sup>&</sup>lt;sup>3</sup> Nitrate will be used only for calculation of cation/anion balance because of regional nitrate pollution and none used in processes.

<sup>&</sup>lt;sup>4</sup> NE = Not Established

<sup>&</sup>lt;sup>5</sup> If the gross alpha particle activity is greater than the AL or AQL, then calculate the adjusted gross alpha particle activity. The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).

 $<sup>^{\</sup>rm 6}$  Uranium Isotope activity results must be used for calculating Adjusted Gross Alpha.

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Parameter <sup>1</sup>	M25	-UBF	M2	6-O	M27	'-LBF	M28	3-LBF	M29	-UBF	M3	0-O	M31	-LBF	019	)-GL	O49-	GL(R)
	AQL	AL																
	(mg/L)																	
pH (lab)	Monitor																	
Bicarbonate	Monitor																	
Calcium	Monitor																	
Carbonate	Monitor																	
Chloride	Monitor																	
Nitrate as nitrogen <sup>3</sup>	Monitor																	
Potassium	Monitor																	
Sodium	Monitor																	
Cation/anion balance	Monitor																	
Aluminum	NE	0.71																
Antimony	0.006	0.005	0.016	NE	0.006	0.005	0.006	0.005	0.006	0.005	0.006	0.005	0.006	0.005	0.006	0.005	0.006	0.005
Arsenic	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026
Barium	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6
Beryllium	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032	0.004	0.0032
Cadmium	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004
Chromium (total)	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08
Cobalt	NE	0.005																
Copper	NE	0.8																
Iron	NE	2.2																
Lead	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Manganese	NE	0.22																
Mercury	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016
Nickel	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	0.13	NE	0.1	0.08
Selenium	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04
Thallium	0.024	NE	0.002	0.0016	0.024	NE												
Zinc	NE	4																
Gross Alpha	NE	15																
Adjusted Gross Alpha (pCi/L) <sup>5</sup>	15	12	15	12	15	12	15	12	15	12	15	12	15	12	15	12	15	12
Radium 226 + 228 (pCi/L)	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4	5	4
Total Uranium Isotopes (pCi/L) <sup>6</sup>	Monitor																	
Total Uranium	Monitor																	
Total petroleum hydrocarbons- diesel	Monitor																	
Benzene	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004
Ethylbenzene	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56
Toluene	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
Total Xylene	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8	10	8



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

 $<sup>^{2}</sup>$  Monitor = Monitoring required, but no AQL or AL will be established in the permit.

<sup>&</sup>lt;sup>3</sup> Nitrate will be used only for calculation of cation/anion balance because of regional nitrate pollution and none used in processes.

<sup>&</sup>lt;sup>4</sup> NE = Not Established

<sup>&</sup>lt;sup>5</sup> If the gross alpha particle activity is greater than the AL or AQL, then calculate the adjusted gross alpha particle activity. The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).

 $<sup>^{\</sup>rm 6}$  Uranium Isotope activity results must be used for calculating Adjusted Gross Alpha.

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Parameter <sup>1</sup>	P19	-1-0	P49	9-0	M52	-UBF	M54	I-LBF	M5	4-0	M33-UBF (re	eplacement)
	AQL (mg/L)	AL (mg/L)										
pH (lab)	Monitor	Monitor										
Bicarbonate	Monitor	Monitor										
Calcium	Monitor	Monitor										
Carbonate	Monitor	Monitor										
Chloride	Monitor	Monitor										
Nitrate as nitrogen <sup>3</sup>	Monitor	Monitor										
Potassium	Monitor	Monitor										
Sodium	Monitor	Monitor										
Cation/anion balance	Monitor	Monitor										
Aluminum	NE	0.71	NE	0.71	NE	0.16	NE	0.16	NE	0.16	Reserved	Reserved
Antimony	0.006	0.005	0.006	0.005	0.006	0.0048	0.006	0.0048	0.006	0.0048	Reserved	Reserved
Arsenic	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	0.05	0.026	Reserved	Reserved
Barium	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	2.0	1.6	Reserved	Reserved
Beryllium	0.0053	NE	0.0053	NE	0.004	0.0032	0.004	0.0032	0.004	0.0032	Reserved	Reserved
Cadmium	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	Reserved	Reserved
Chromium (total)	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	0.10	0.08	Reserved	Reserved
Cobalt	NE	0.005	NE	0.005	NE	0.002	NE	0.002	NE	0.002	Reserved	Reserved
Copper	NE	0.8	Reserved	Reserved								
Iron	NE	2.2	NE	2.2	NE	1.4	NE	1.4	NE	1.4	Reserved	Reserved
Lead	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	Reserved	Reserved
Manganese	NE	0.22	NE	0.22	NE	0.52	NE	0.52	NE	0.22	Reserved	Reserved
Mercury	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	Reserved	Reserved
Nickel	0.13	NE	0.1	0.08	0.1	0.08	0.1	0.08	0.1	0.08	Reserved	Reserved
Selenium	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	0.05	0.04	Reserved	Reserved
Thallium	0.024	NE	0.002	0.0016	0.002	0.0016	0.002	0.0016	0.002	0.0016	Reserved	Reserved
Zinc	NE	4	Reserved	Reserved								
Gross Alpha	NE	15	Reserved	Reserved								
Adjusted Gross Alpha (pCi/L) <sup>5</sup>	15	12	15	12	15	12	26.5	NE	26.5	NE	Reserved	Reserved
Radium 226 + 228 (pCi/L)	5	4	5	4	17.2	NE	17.2	NE	17.2	NE	Reserved	Reserved
Total Uranium Isotopes (pCi/L) <sup>6</sup>	Monitor	Monitor										
Total Uranium	Monitor	Monitor										
Total petroleum hydrocarbons- diesel	Monitor	Monitor	Monitor	Monitor	Monitor	NE	Monitor	Monitor	Monitor	Monitor	Monitor	Monitor
Benzene	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004	0.005	0.004
Ethylbenzene	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56	0.7	0.56
Toluene	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8	1.0	0.8
Total Xylene	10	8	10	8	10	8	10	8	10	8	10	8



<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

 $<sup>^{2}</sup>$  Monitor = Monitoring required, but no AQL or AL will be established in the permit.

<sup>&</sup>lt;sup>3</sup> Nitrate will be used only for calculation of cation/anion balance because of regional nitrate pollution and none used in processes.

<sup>&</sup>lt;sup>4</sup> NE = Not Established

<sup>&</sup>lt;sup>5</sup> If the gross alpha particle activity is greater than the AL or AQL, then calculate the adjusted gross alpha particle activity. The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).

<sup>&</sup>lt;sup>6</sup> Uranium Isotope activity results must be used for calculating Adjusted Gross Alpha.

Parameter <sup>1</sup>		-UBF	M67-		M68-	
arameter		nitoring Well)	(USDW Mon	itoring Well)	(USDW Moni	itoring Well)
	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
pH (lab)	TBD	TBD	TBD	TBD	TBD	TBD
Bicarbonate	TBD	TBD	TBD	TBD	TBD	TBD
Calcium	TBD	TBD	TBD	TBD	TBD	TBD
Carbonate	TBD	TBD	TBD	TBD	TBD	TBD
Chloride	TBD	TBD	TBD	TBD	TBD	TBD
Nitrate as nitrogen <sup>3</sup>	TBD	TBD	TBD	TBD	TBD	TBD
Potassium	TBD	TBD	TBD	TBD	TBD	TBD
Sodium	TBD	TBD	TBD	TBD	TBD	TBD
Cation/anion balance	TBD	TBD	TBD	TBD	TBD	TBD
Aluminum	TBD	TBD	TBD	TBD	TBD	TBD
Antimony	TBD	TBD	TBD	TBD	TBD	TBD
Arsenic	TBD	TBD	TBD	TBD	TBD	TBD
Barium	TBD	TBD	TBD	TBD	TBD	TBD
Beryllium	TBD	TBD	TBD	TBD	TBD	TBD
Cadmium	TBD	TBD	TBD	TBD	TBD	TBD
Chromium (total)	TBD	TBD	TBD	TBD	TBD	TBD
Cobalt	TBD	TBD	TBD	TBD	TBD	TBD
Copper	TBD	TBD	TBD	TBD	TBD	TBD
Iron	TBD	TBD	TBD	TBD	TBD	TBD
Lead	TBD	TBD	TBD	TBD	TBD	TBD
Manganese	TBD	TBD	TBD	TBD	TBD	TBD
Mercury	TBD	TBD	TBD	TBD	TBD	TBD
Nickel	TBD	TBD	TBD	TBD	TBD	TBD
Selenium	TBD	TBD	TBD	TBD	TBD	TBD
Thallium	TBD	TBD	TBD	TBD	TBD	TBD
Zinc	TBD	TBD	TBD	TBD	TBD	TBD
Gross Alpha	TBD	TBD	TBD	TBD	TBD	TBD
Adjusted Gross Alpha (pCi/L) <sup>5</sup>	TBD	TBD	TBD	TBD	TBD	TBD
Radium 226 + 228 (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium Isotopes (pCi/L) <sup>6</sup>	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium	TBD	TBD	TBD	TBD	TBD	TBD
Total petroleum hydrocarbons- diesel	TBD	TBD	TBD	TBD	TBD	TBD
Benzene	TBD	TBD	TBD	TBD	TBD	TBD
Ethylbenzene	TBD	TBD	TBD	TBD	TBD	TBD
Toluene	TBD	TBD	TBD	TBD	TBD	TBD
Total Xylene	TBD	TBD	TBD	TBD	TBD	TBD

 $AL = alert\ level$ 

AQL = Aquifer Quality Limit

 $mg/L = milligrams \ per \ liter$ 

pCi/L = picocuries per liter TBD = To Be Determined

 $USDW = Underground\ Source\ of\ Drinking\ Water$ 

<sup>&</sup>lt;sup>1</sup> Metals must be analyzed as dissolved metals.

<sup>&</sup>lt;sup>2</sup> Monitor = Monitoring required, but no AQL or AL will be established in the permit.

<sup>&</sup>lt;sup>3</sup> Nitrate will be used only for calculation of cation/anion balance because of regional nitrate pollution and none used in processes.

<sup>&</sup>lt;sup>4</sup> NE = Not Established

<sup>&</sup>lt;sup>5</sup> If the gross alpha particle activity is greater than the AL or AQL, then calculate the adjusted gross alpha particle activity. The adjusted gross alpha particle activity is the gross alpha particle activity, including radium 226, and any other alpha emitters, if present in the water sample, minus radon and total uranium (the sum of uranium 238, uranium 235 and uranium 234 isotopes). The gross alpha analytical procedure (evaporation technique: EPA Method 900.0) drives off radon gas in the water samples. Therefore, the Adjusted Gross Alpha should be calculated using the following formula: (Laboratory Reported Gross Alpha MINUS Sum of the Uranium Isotopes).

 $<sup>^{6}</sup>$  Uranium Isotope activity results must be used for calculating Adjusted Gross Alpha.

Parameter	M69-UBF (USDW Monitoring Well)		M70-LBF (USDW Monitoring Well)		M71-UBF (USDW Monitoring Well)	
	AQL	AL	AQL	AL	AQL	AL
	(mg/l)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
pH (lab)	TBD	TBD	TBD	TBD	TBD	TBD
Bicarbonate	TBD	TBD	TBD	TBD	TBD	TBD
Calcium	TBD	TBD	TBD	TBD	TBD	TBD
Carbonate	TBD	TBD	TBD	TBD	TBD	TBD
Chloride	TBD	TBD	TBD	TBD	TBD	TBD
Nitrate as nitrogen	TBD	TBD	TBD	TBD	TBD	TBD
Potassium	TBD	TBD	TBD	TBD	TBD	TBD
Sodium	TBD	TBD	TBD	TBD	TBD	TBD
Cation/anion balance	TBD	TBD	TBD	TBD	TBD	TBD
Aluminum	TBD	TBD	TBD	TBD	TBD	TBD
Antimony	TBD	TBD	TBD	TBD	TBD	TBD
Arsenic	TBD	TBD	TBD	TBD	TBD	TBD
Barium	TBD	TBD	TBD	TBD	TBD	TBD
Beryllium	TBD	TBD	TBD	TBD	TBD	TBD
Cadmium	TBD	TBD	TBD	TBD	TBD	TBD
Chromium (total)	TBD	TBD	TBD	TBD	TBD	TBD
Cobalt	TBD	TBD	TBD	TBD	TBD	TBD
Copper	TBD	TBD	TBD	TBD	TBD	TBD
Iron	TBD	TBD	TBD	TBD	TBD	TBD
Lead	TBD	TBD	TBD	TBD	TBD	TBD
Manganese	TBD	TBD	TBD	TBD	TBD	TBD
Mercury	TBD	TBD	TBD	TBD	TBD	TBD
Nickel	TBD	TBD	TBD	TBD	TBD	TBD
Selenium	TBD	TBD	TBD	TBD	TBD	TBD
Thallium	TBD	TBD	TBD	TBD	TBD	TBD
Zinc	TBD	TBD	TBD	TBD	TBD	TBD
Gross Alpha	TBD	TBD	TBD	TBD	TBD	TBD
Adjusted Gross Alpha (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Radium 226 + 228 (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium Isotopes (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium	TBD	TBD	TBD	TBD	TBD	TBD
Total petroleum hydrocarbons- diesel	TBD	TBD	TBD	TBD	TBD	TBD
Benzene	TBD	TBD	TBD	TBD	TBD	TBD
Ethylbenzene	TBD	TBD	TBD	TBD	TBD	TBD
Toluene	TBD	TBD	TBD	TBD	TBD	TBD
Total Xylene	TBD	TBD	TBD	TBD	TBD	TBD

Notes:

AL = alert level

AQL = Aquifer Quality Limit

mg/L = milligrams per liter

pCi/L = picocuries per liter

TBD = To Be Determined

USDW = Underground Source of Drinking Water

Parameter	M72-UBF (ACD Demonstration Well)		M73-LBF (ACD Demonstration Well)		M62-LBF (Fault Monitoring Well)	
	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
pH (lab)	TBD	TBD	TBD	TBD	TBD	TBD
Bicarbonate	TBD	TBD	TBD	TBD	TBD	TBD
Calcium	TBD	TBD	TBD	TBD	TBD	TBD
Carbonate	TBD	TBD	TBD	TBD	TBD	TBD
Chloride	TBD	TBD	TBD	TBD	TBD	TBD
Nitrate as nitrogen	TBD	TBD	TBD	TBD	TBD	TBD
Potassium	TBD	TBD	TBD	TBD	TBD	TBD
Sodium	TBD	TBD	TBD	TBD	TBD	TBD
Cation/anion balance	TBD	TBD	TBD	TBD	TBD	TBD
Aluminum	TBD	TBD	TBD	TBD	TBD	TBD
Antimony	TBD	TBD	TBD	TBD	TBD	TBD
Arsenic	TBD	TBD	TBD	TBD	TBD	TBD
Barium	TBD	TBD	TBD	TBD	TBD	TBD
Beryllium	TBD	TBD	TBD	TBD	TBD	TBD
Cadmium	TBD	TBD	TBD	TBD	TBD	TBD
Chromium (total)	TBD	TBD	TBD	TBD	TBD	TBD
Cobalt	TBD	TBD	TBD	TBD	TBD	TBD
Copper	TBD	TBD	TBD	TBD	TBD	TBD
Iron	TBD	TBD	TBD	TBD	TBD	TBD
Lead	TBD	TBD	TBD	TBD	TBD	TBD
Manganese	TBD	TBD	TBD	TBD	TBD	TBD
Mercury	TBD	TBD	TBD	TBD	TBD	TBD
Nickel	TBD	TBD	TBD	TBD	TBD	TBD
Selenium	TBD	TBD	TBD	TBD	TBD	TBD
Thallium	TBD	TBD	TBD	TBD	TBD	TBD
Zinc	TBD	TBD	TBD	TBD	TBD	TBD
Gross Alpha	TBD	TBD	TBD	TBD	TBD	TBD
Adjusted Gross Alpha (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Radium 226 + 228 (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium Isotopes (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium	TBD	TBD	TBD	TBD	TBD	TBD
Total petroleum hydrocarbons- diesel	TBD	TBD	TBD	TBD	TBD	TBD
Benzene	TBD	TBD	TBD	TBD	TBD	TBD
Ethylbenzene	TBD	TBD	TBD	TBD	TBD	TBD
Toluene	TBD	TBD	TBD	TBD	TBD	TBD
Total Xylene	TBD	TBD	TBD	TBD	TBD	TBD

Notes:

ACD = annular conductivity device

AL = alert level

AQL = Aquifer Quality Limit

mg/L = milligrams per liter

pCi/L = picocuries per liter

TBD = To Be Determined

Parameter	M63-LBF (Fault Monitoring Well)		M64-LBF (Fault Monitoring Well)		M65-LBF (Fault Monitoring Well)	
	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
pH (lab)	TBD	TBD	TBD	TBD	TBD	TBD
Bicarbonate	TBD	TBD	TBD	TBD	TBD	TBD
Calcium	TBD	TBD	TBD	TBD	TBD	TBD
Carbonate	TBD	TBD	TBD	TBD	TBD	TBD
Chloride	TBD	TBD	TBD	TBD	TBD	TBD
Nitrate as nitrogen	TBD	TBD	TBD	TBD	TBD	TBD
Potassium	TBD	TBD	TBD	TBD	TBD	TBD
Sodium	TBD	TBD	TBD	TBD	TBD	TBD
Cation/anion balance	TBD	TBD	TBD	TBD	TBD	TBD
Aluminum	TBD	TBD	TBD	TBD	TBD	TBD
Antimony	TBD	TBD	TBD	TBD	TBD	TBD
Arsenic	TBD	TBD	TBD	TBD	TBD	TBD
Barium	TBD	TBD	TBD	TBD	TBD	TBD
Beryllium	TBD	TBD	TBD	TBD	TBD	TBD
Cadmium	TBD	TBD	TBD	TBD	TBD	TBD
Chromium (total)	TBD	TBD	TBD	TBD	TBD	TBD
Cobalt	TBD	TBD	TBD	TBD	TBD	TBD
Copper	TBD	TBD	TBD	TBD	TBD	TBD
Iron	TBD	TBD	TBD	TBD	TBD	TBD
Lead	TBD	TBD	TBD	TBD	TBD	TBD
Manganese	TBD	TBD	TBD	TBD	TBD	TBD
Mercury	TBD	TBD	TBD	TBD	TBD	TBD
Nickel	TBD	TBD	TBD	TBD	TBD	TBD
Selenium	TBD	TBD	TBD	TBD	TBD	TBD
Thallium	TBD	TBD	TBD	TBD	TBD	TBD
Zinc	TBD	TBD	TBD	TBD	TBD	TBD
Gross Alpha	TBD	TBD	TBD	TBD	TBD	TBD
Adjusted Gross Alpha (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Radium 226 + 228 (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium Isotopes (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium	TBD	TBD	TBD	TBD	TBD	TBD
Total petroleum hydrocarbons- diesel	TBD	TBD	TBD	TBD	TBD	TBD
Benzene	TBD	TBD	TBD	TBD	TBD	TBD
Ethylbenzene	TBD	TBD	TBD	TBD	TBD	TBD
Toluene	TBD	TBD	TBD	TBD	TBD	TBD
Total Xylene	TBD	TBD	TBD	TBD	TBD	TBD

AL = alert level
AQL = Aquifer Quality Limit
mg/L = milligrams per liter
pCi/L = picocuries per liter
TBD = To Be Determined

Parameter	M75-UBF (Fault Monitoring Well)		M74-O (Fault Monitoring Well)		M77-UBF (Fault Monitoring Well)	
	AQL	AL	AQL	AL	AQL	AL
	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)	(mg/L)
pH (lab)	TBD	TBD	TBD	TBD	TBD	TBD
Bicarbonate	TBD	TBD	TBD	TBD	TBD	TBD
Calcium	TBD	TBD	TBD	TBD	TBD	TBD
Carbonate	TBD	TBD	TBD	TBD	TBD	TBD
Chloride	TBD	TBD	TBD	TBD	TBD	TBD
Nitrate as nitrogen	TBD	TBD	TBD	TBD	TBD	TBD
Potassium	TBD	TBD	TBD	TBD	TBD	TBD
Sodium	TBD	TBD	TBD	TBD	TBD	TBD
Cation/anion balance	TBD	TBD	TBD	TBD	TBD	TBD
Aluminum	TBD	TBD	TBD	TBD	TBD	TBD
Antimony	TBD	TBD	TBD	TBD	TBD	TBD
Arsenic	TBD	TBD	TBD	TBD	TBD	TBD
Barium	TBD	TBD	TBD	TBD	TBD	TBD
Beryllium	TBD	TBD	TBD	TBD	TBD	TBD
Cadmium	TBD	TBD	TBD	TBD	TBD	TBD
Chromium (total)	TBD	TBD	TBD	TBD	TBD	TBD
Cobalt	TBD	TBD	TBD	TBD	TBD	TBD
Copper	TBD	TBD	TBD	TBD	TBD	TBD
Iron	TBD	TBD	TBD	TBD	TBD	TBD
Lead	TBD	TBD	TBD	TBD	TBD	TBD
Manganese	TBD	TBD	TBD	TBD	TBD	TBD
Mercury	TBD	TBD	TBD	TBD	TBD	TBD
Nickel	TBD	TBD	TBD	TBD	TBD	TBD
Selenium	TBD	TBD	TBD	TBD	TBD	TBD
Thallium	TBD	TBD	TBD	TBD	TBD	TBD
Zinc	TBD	TBD	TBD	TBD	TBD	TBD
Gross Alpha	TBD	TBD	TBD	TBD	TBD	TBD
Adjusted Gross Alpha (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Radium 226 + 228 (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium Isotopes (pCi/L)	TBD	TBD	TBD	TBD	TBD	TBD
Total Uranium	TBD	TBD	TBD	TBD	TBD	TBD
Total petroleum hydrocarbons- diesel	TBD	TBD	TBD	TBD	TBD	TBD
Benzene	TBD	TBD	TBD	TBD	TBD	TBD
Ethylbenzene	TBD	TBD	TBD	TBD	TBD	TBD
Toluene	TBD	TBD	TBD	TBD	TBD	TBD
Total Xylene	TBD	TBD	TBD	TBD	TBD	TBD

AL = alert level
AQL = Aquifer Quality Limit
mg/L = milligrams per liter
pCi/L = picocuries per liter
TBD = To Be Determined

Table 14.1. Annual Groundwater Compliance Monitoring at Supplemental Monitoring Wells						
M76-O						
Parameter	(Fault Monitoring Well)					
	AQL	AL				
	(mg/L)	(mg/L)				
pH (lab)	TBD	TBD				
Bicarbonate	TBD	TBD				
Calcium	TBD	TBD				
Carbonate	TBD	TBD				
Chloride	TBD	TBD				
Nitrate as nitrogen	TBD	TBD				
Potassium	TBD	TBD				
Sodium	TBD	TBD				
Cation/anion balance	TBD	TBD				
Aluminum	TBD	TBD				
Antimony	TBD	TBD				
Arsenic	TBD	TBD				
Barium	TBD	TBD				
Beryllium	TBD	TBD				
Cadmium	TBD	TBD				
Chromium (total)	TBD	TBD				
Cobalt	TBD	TBD				
Copper	TBD	TBD				
Iron	TBD	TBD				
Lead	TBD	TBD				
Manganese	TBD	TBD				
Mercury	TBD	TBD				
Nickel	TBD	TBD				
Selenium	TBD	TBD				
Thallium	TBD	TBD				
Zinc	TBD	TBD				
Gross Alpha	TBD	TBD				
Adjusted Gross Alpha (pCi/L)	TBD	TBD				
Radium 226 + 228 (pCi/L)	TBD	TBD				
Total Uranium Isotopes (pCi/L)	TBD	TBD				
Total Uranium	TBD	TBD				
Total petroleum hydrocarbons- diesel	TBD	TBD				
Benzene	TBD	TBD				
Ethylbenzene	TBD	TBD				
Toluene	TBD	TBD				
Total Xylene	TBD	TBD				

Notes:

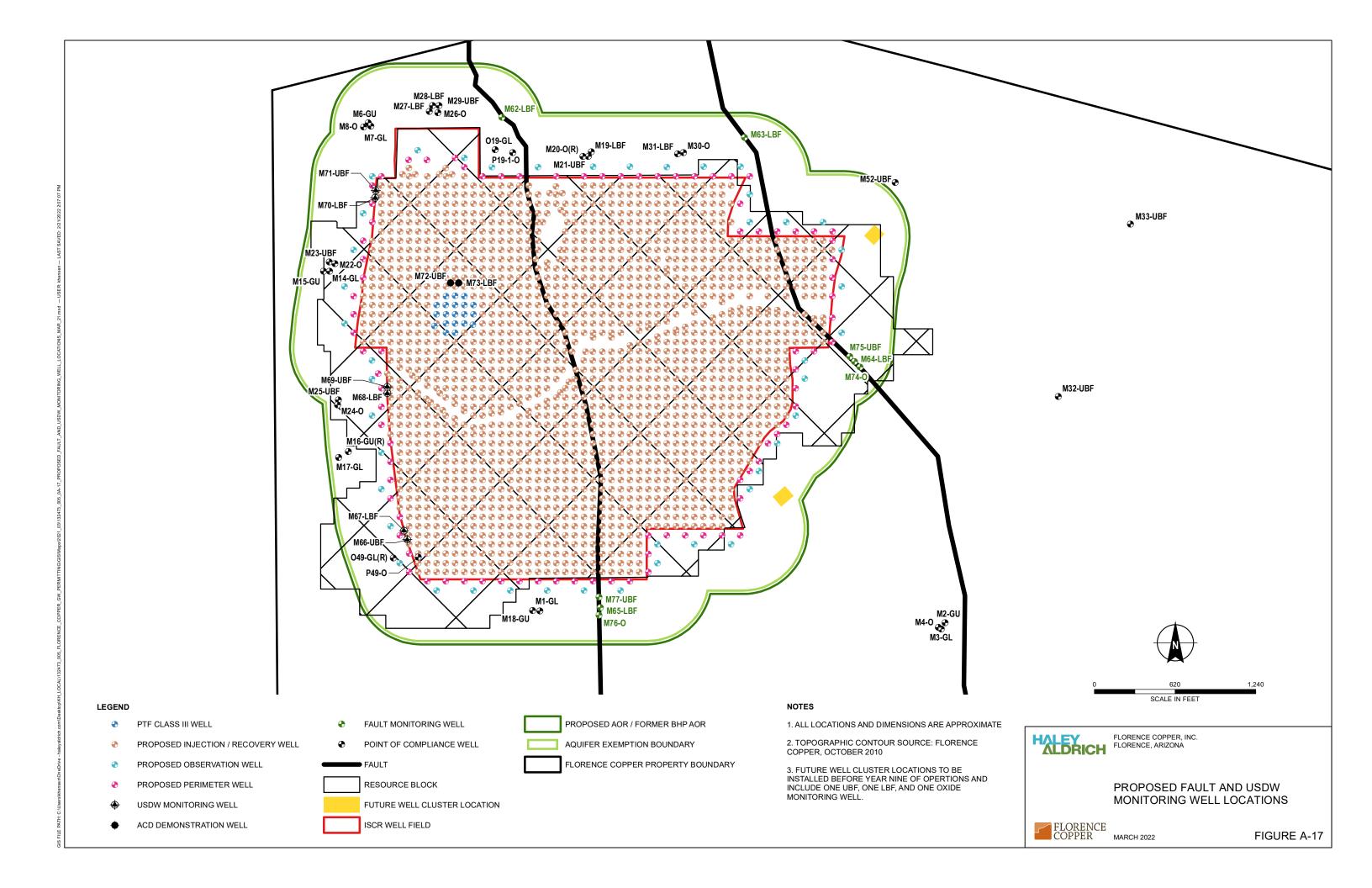
AL = alert level

AQL = Aquifer Quality Limit

mg/L = milligrams per liter

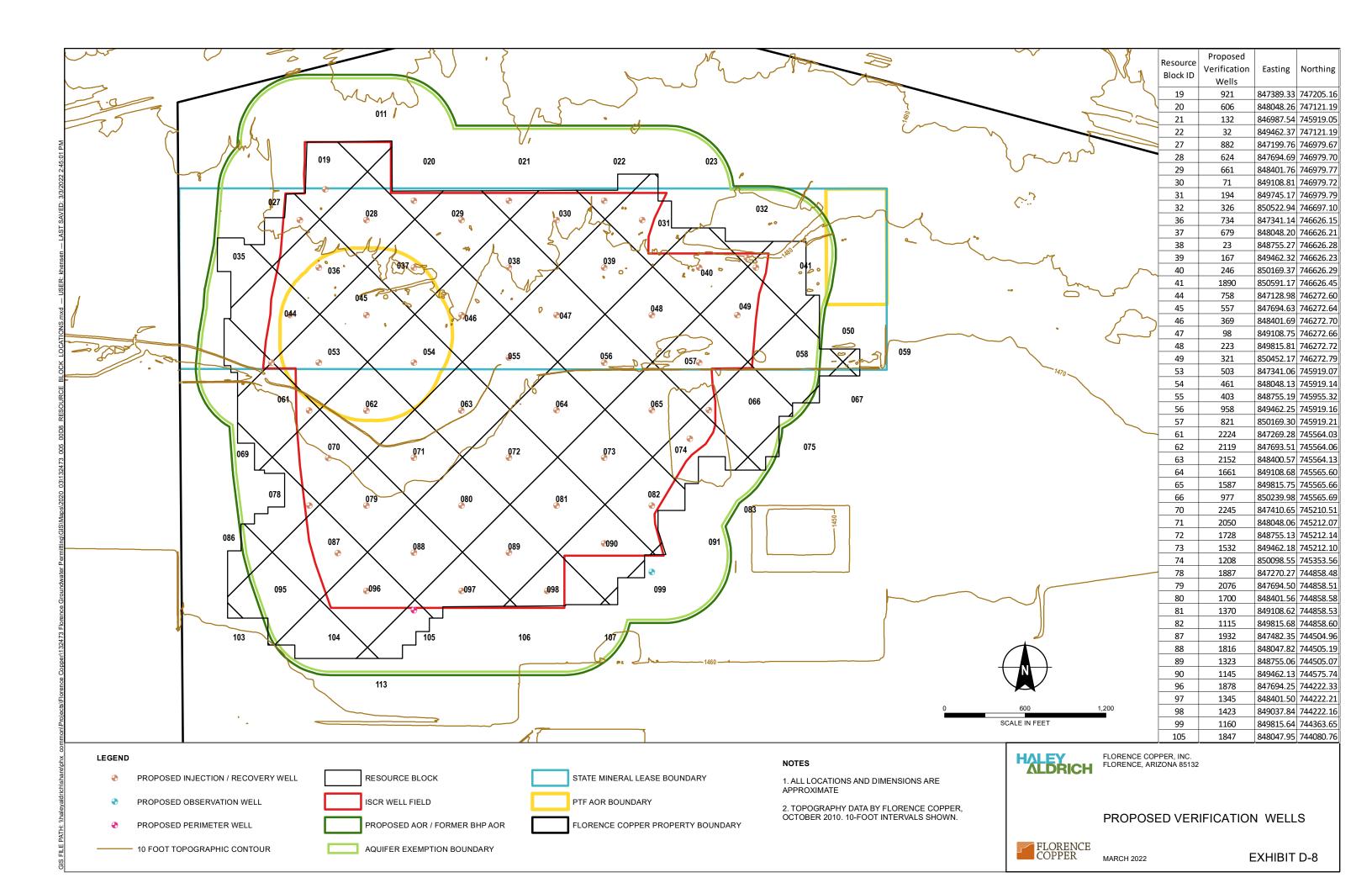
pCi/L = picocuries per liter

TBD = To Be Determined



### **EXHIBIT D-8**

**Proposed Verification Wells Figure** 



Attachment E Plugging and Abandonment Plan (40 CFR §§ 144.31, 144.51 & 146.34) Application for Class III Underground Injection Control Permit
Florence Copper Project Florence Copper Inc.
November 2021

### **Table of Contents**

			Page
List	of Exhi	bits	i
E.1	INTRO	DDUCTION	1
E.2	PLUG	1	
	E.2.1	Applicability	1
	E.2.2	Objectives	2
	E.2.3	Hydrogeologic Setting	2
	E.2.4	Overview of ISCR Operations	2
	E.2.5	Licenses, Notifications, and Approvals	3
		E.2.5.1 Licensed Drillers	3
		E.2.5.2 Abandonment Notification and Authorization	3
E.3	WELL,	CORE HOLE, AND SHAFT ABANDONMENT PROCEDURES	4
	E.3.1	•	4
	E.3.2	Equipment and Materials	5
	E.3.3		5
	E.3.4	•	6
	E.3.5	Documentation and Reporting	6
		E.3.5.1 Reporting Responsibilities	6
		E.3.5.2 Reports to ADWR	6
		E.3.5.3 Reports to USEPA	7
		E.3.5.4 Reports to ADEQ	7
		E.3.5.5 Maintenance of Records	7
E.4		GING AND ABANDONMENT FORMS	8
F 5	PHUGO	GING AND ARANDONMENT COST ESTIMATE	9

### **List of Exhibits**

Exhibit No.	Title
E-1	Form 7520-19, Schematic Diagrams of Planned Class III ISCR Wells by Resource Block
E-2	Plugging and Abandonment Forms for Non-Class III Wells and Shafts within AOR
E-3	Plugging and Abandonment Forms for Core Holes within AOR
E-4	Plugging and Abandonment Forms for BHP Class III Test Wells

# **Application for Class III Underground Injection Control Permit Florence Copper Project**

# Attachment E: Plugging and Abandonment Plan (40 CFR §§ 144.31. 144.51 & 146.34)

#### **E.1 INTRODUCTION**

This Attachment describes the plugging and abandonment procedures and individual well and core hole details.

This Attachment has been prepared in support of an application (Application) by Florence Copper Inc. (Florence Copper) to the United States Environmental Protection Agency (USEPA) for an Underground Injection Control Class III Permit (UIC Permit) for the planned In-Situ Copper Recovery (ISCR) facility at the Florence Copper Project (FCP) in Pinal County, Arizona. With this Application, Florence Copper seeks authorization to construct and operate a commercial-scale ISCR facility at the FCP site. Florence Copper proposes to incorporate the pilot-scale Production Test Facility (PTF), which is currently operating under UIC Permit R9UIC-AZ3-FY11-1, into the planned commercial-scale ISCR facility at the FCP site.

This plugging and abandonment plan is based on Appendix C of UIC Permit R9UIC-AZ3-FY11-1, with revision and updates as necessary to reflect the proposed operations and operational experience at the PTF.

#### **E.2 PLUGGING AND ABANDONMENT**

#### **E.2.1** Applicability

This plugging and abandonment plan is applicable to proposed Class III wells, existing Class III wells, and non-Class III wells, core holes, and shafts within the FCP ISCR area and the associated Area of Review (AOR) located at the FCP site. This plan applies to all wells, core holes, and shafts within the AOR because the corrective action for each of the wells and core holes within the AOR is to plug and abandon them using Class III well standards. The AOR is defined in Attachment A of this Application as a 500-foot circumscribing area around the planned commercial-scale ISCR well field.

This plugging and abandonment plan has been designed to ensure that all existing and future wells and core holes located within the AOR will be plugged and abandoned (1) in a manner that will prevent or stop the migration of injected solutions into Underground Sources of Drinking Water (USDW) through a penetrating core hole or well, and (2) in accordance with applicable permits and regulations administered by the USEPA, the Arizona Department of Environmental Quality (ADEQ), and Arizona Department of Water Resources (ADWR).

Plugging and abandonment of existing non-Class III wells, core holes within the AOR will occur prior to commencement of injection within 500 feet of the well or core hole. Plugging and abandonment of Class III wells will occur during closure, or when an individual Class III well is retired or closed. Retirement of a Class III well may occur if the well fails to pass mechanical integrity testing or if the well becomes damaged beyond repair.

Florence Copper plans to convert Conoco Shaft No. 1 for the recovery of ISCR solutions. The Conoco Airshaft (Shaft No. 2) will be abandoned prior to commencement of ISCR operations within 500 feet of the shaft. Conoco Shaft No. 1 will be plugged and abandoned in accordance with this Plugging and Abandonment Plan at the conclusion of ISCR operations.

All abandonment notifications, approvals, procedures, documentation, and reporting required under this plan apply to all wells constructed within the commercial-scale AOR, which includes the Class III PTF wells and BHP test wells.

#### **E.2.2** Objectives

The objectives of the Plugging and Abandonment Plan are to ensure that wells, core holes, and shafts will be plugged and sealed in a manner that will prevent the migration of injected fluids into or between USDWs, and to ensure compliance with the applicable requirements of the ADWR (Arizona Administrative Code [A.A.C.] R12-15-816 [Abandonment], and ADWR Well Abandonment Handbook) and the USEPA (40 Code of Federal Regulations [CFR] 146.10 [Plugging and Abandoning Class I-V Wells]).

#### **E.2.3** Hydrogeologic Setting

The saturated geologic formations underlying the FCP site have been divided into three distinct water-bearing hydrostratigraphic units referred to as the Upper Basin Fill Unit (UBFU), Lower Basin Fill Unit (LBFU), and the Bedrock Oxide Unit. The UBFU and LBFU are separated by a thin, regionally extensive aquitard referred to as the Middle Fine-Grained Unit (MFGU). The injection and recovery wells will be completed in the Bedrock Oxide Unit, the uppermost zone of the bedrock complex underlying the FCP site. The injection zone extends from a point 40 feet below the top of the Bedrock Oxide Unit to the oxide/sulfide contact at the base of the Bedrock Oxide Unit. The uppermost 40 feet of the Bedrock Oxide Unit is excluded from injection and is referred to as the exclusion zone.

#### **E.2.4** Overview of ISCR Operations

The ISCR area will be prepared for injection and recovery operations through a three-step process that includes: (a) the abandonment of core holes and existing wells (except Class III wells) within the active well field area and within 500 feet of the planned active ISCR well field area; (b) installation of injection, recovery, and observation wells as required; and (c) installation of ancillary facilities such as power and conveyance infrastructure.

The planned ISCR process involves injecting raffinate (approximately 99.5 percent water mixed with 0.5 percent sulfuric acid) through injection wells into the oxide zone of the bedrock beneath the site for the purposes of dissolving copper minerals from the ore body. The estimated injection zone is between approximately 500 feet below ground surface (bgs) to 1,185 feet bgs. The resulting copper-bearing solution will be pumped by recovery wells to the surface where copper will be removed from the solution in a solvent extraction electro winning (SX/EW) plant. The barren solution from the SX/EW plant will be re-acidified and re-injected back into the oxide zone.

Once copper concentration in the solution declines to a predetermined level, well closure will begin. Closure will consist of circulation of fresh water through the wells until groundwater has been restored to a quality that meets criteria specified in Aquifer Protection Permit (APP) No. P-101704 (the APP) and the UIC Permit. Depending on copper content, solutions produced during closure operations will be withdrawn through the recovery wells and conveyed to the SX/EW plant for processing or neutralized and pumped to one of the water impoundments.

Injection will be discontinued and the ISCR wells undergoing closure will be provisionally considered closed once constituent concentrations in groundwater pumped from the injection zone meet the closure criteria specified in the APP and the UIC Permit. Not more than 2 years following the provisional closure of an ISCR well, the well will be abandoned in accordance with procedures outlined in this plan and requirements set forth in the UIC Permit and the APP.

At the conclusion of ISCR operations, proposed Class III wells within the AOR will remain open for use in monitoring groundwater conditions until ADEQ and USEPA give approval to plug and abandon the wells. FCP ISCR Class III wells will not be plugged and abandoned until written authorization to do so has been received from both ADEQ and USEPA. Florence Copper proposes to keep one ISCR well open per resource block following rinsing to facilitate rebound monitoring of Level 1 parameters on an annual basis. These wells may also be used as recovery wells for additional rinsing if monitoring indicates additional rinsing is required. The proposed monitoring duration is 5 years, after which time the wells will be abandoned in accordance with this Plugging and Abandonment Plan.

Post-closure monitoring at the point of compliance (POC) wells, supplemental monitoring wells, and verification wells will continue following completion of formation rinsing for the period of time specified in the APP and the UIC Permit. Observation wells are installed specifically for the purpose of monitoring hydraulic control during ISCR observations. Once ISCR operations cease and formation rinsing is complete, the observation wells will no longer be required to monitor hydraulic control. No monitoring is proposed at the observation wells following the cessation of rinsing and cessation of hydraulic control. The POC wells will remain open for the period of time necessary to complete closure and post-closure monitoring specified in the APP and the UIC Permit.

#### **E.2.5** Licenses, Notifications, and Approvals

#### E.2.5.1 Licensed Drillers

Abandonment procedures are described in this document and will only be performed by well drillers licensed by the ADWR pursuant to Arizona Revised Statutes § 45-595(B), or under the direction of such licensed well drillers.

#### E.2.5.2 Abandonment Notification and Authorization

Florence Copper will convey notice of intent to abandon a well or core hole to ADWR using Form 55-38 (*Notice of Intent to Abandon a Well*) approximately 30 days prior to the planned commencement of abandonment activities for a well or core hole. Form 55-38 will include information describing the

location, type, and construction of the well or core hole, and the proposed plugging or abandonment method.

In addition, Florence Copper will convey notice of proposed abandonment of Class III and non-Class III wells and all core holes to the USEPA on a revised copy of Form 7520-19 (*Plugging and Abandonment Plan*) approximately 60 days prior to the planned abandonment. The form will include descriptions of the proposed abandonment materials and methods of emplacement. Copies of Forms 55-38 and 7520-19 will be submitted to ADEQ concurrently with submittal to ADWR and USEPA.

Once ADWR has approved the abandonment method and materials identified on ADWR Form 55-38, ADWR will issue authorization to the driller to commence with the proposed abandonment. Authorization from ADWR will be in the form of a "well abandonment card" issued to the licensed driller. No well or core hole will be abandoned on the FCP site unless the driller has received a well abandonment card, issued by the Director of the ADWR, authorizing the abandonment of the specific well or core hole.

#### E.3 WELL, CORE HOLE, AND SHAFT ABANDONMENT PROCEDURES

The standard abandonment procedure will be to completely fill the well, core hole, or shaft with an appropriate sealing material, with some variation depending on the type, condition, and total depth of the well or core hole. Within the AOR, the sealing material will be Type V cement, or approved equivalent as defined in the UIC Permit. The condition and depth of each well, core hole, or shaft varies significantly. Abandonment will be considered complete when all applicable sealing steps set forth below have been completed or have been determined to be unnecessary.

#### **E.3.1** Well or Core Hole Preparation

The following tasks will be performed to prepare each well or core hole for effective sealing.

- a. <u>Locate and Inspect Well, Core Hole or Shaft</u>: The well or core hole will be located using available survey coordinates. The condition and location of the well or core hole will be recorded. If the well or core hole is not visible from the surface, the area will be excavated to locate the collar of the core hole or expose the surface casing of the well. A video log will be run in each of the shafts to verify the condition of the shaft.
- b. Move in Workover Rig: A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well, core hole, or shaft.
- c. <u>Equipment Removal</u>: All pumps, tubing, wiring, and ancillary equipment within each well will be removed prior to abandonment of the well. No equipment exists within the core holes or shaft.
- d. Perforations: If records demonstrate that a well annulus is inadequately sealed and its casing is not removed, the casing will be perforated to allow installation of cement grout in the annulus. If necessary and the casing extends that distance, perforations will extend from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from 25 feet bgs to 5 feet bgs. Formation tops will be identified based on core hole logs, or information obtained from the site geologic model. Where the contact depth cannot be determined, the entire length of the casing will be perforated, and the entire length of the annulus will be cemented.

- e. <u>Cleaning</u>: Wells and core holes will be cleaned out, if necessary, to a depth of at least 100 feet below the bedrock-LBFU contact to enable proper placement of cement seals. This will be accomplished by installing a work string of tubing and circulating fluids, or drilling, or performing other remedial work as required to clean the well or core hole to the required depth. Video inspection of the shafts has shown that they are open to the required sealing depth. Following removal of ISCR-related equipment, a video log will be run in each shaft to verify that no new obstructions have been introduced into the shafts. If obstructions are observed, they will be removed using well bore fishing procedures.
- f. <u>Equalization of Wellbore Fluids</u>: After cleaning the well or core hole, wellbore fluids (bentonite mud) may be circulated and treated as necessary to achieve equilibrium and stabilize the hole.

#### **E.3.2** Equipment and Materials

The following material and equipment will be used in sealing wells and core holes according to the procedure described below if required to make proper seals.

- a. <u>Cement Grout</u>: All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.
- b. Mechanical Plugs: A mechanical bridge plug will be set at the base of the interval to be cemented off if it is not at the bottom of the well or core hole. Alternately, the well or core hole may be filled with suitable formation stabilizer (i.e., mixture of sand and pea gravel) to support the cement seal during placement. This will prevent migration cement below the interval to be cemented and sealed. Each shaft will be filled with formation stabilizer to the required sealing depth.
- c. <u>Cement Plugs</u>: Cement plugs will consist of Type V cement grout or equivalent approved in accordance with the UIC Permit.
- d. <u>Cement Retainer</u>: If cement grout is to be installed in the annulus behind perforated casing, a cement retainer will be set above the top perforation prior to pumping cement grout into the perforated interval that has been isolated by the cement retainer.
- e. <u>Work String</u>: A work string of small diameter pipe or tubing (tremie pipe) will be used for the placement of cement grout and plugs.

#### **E.3.3** General Procedure for Sealing Wells, Core Holes, and Shafts

The following procedure will be used to seal each well or core hole:

- a. If the surface casing is loose at ground surface, an attempt will be made to remove it. If removal of the casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.
- b. A tremie pipe will be used to place Type V cement in the open well, core hole, or shaft from the bottom of the hole to the top of the hole. Cement retainers, as described above, will be used to force cement grout into the annulus behind perforated intervals, as necessary.

- c. If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the hole.
- d. The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval.

#### **E.3.4** Procedures for Special Circumstances

The following procedures will be completed for special circumstances, as indicated.

- a. <u>Seal of Perched Aquifer</u>: If cascading water is encountered during preparation for abandonment, the well casing in the target area will be cleaned or perforated, isolated with cement plugs, and Type V cement will be used to seal the annulus around the perched layer. Cement seals will be emplaced in four steps as follows:
  - 1. In the area of the observed cascading water, existing casing perforations in the well will be cleaned to the point that they are open and will readily allow neat cement to pass, or new perforations will be cut that will allow neat cement to pass.
  - 2. The well casing will be filled with Type V cement to a point at least 20 feet below the cascading zone and will be allowed to cure for a minimum of 12 hours.
  - 3. A packer will be emplaced above the cascading zone.
  - 4. Type V neat cement will be injected under pressure into the cascading zone until a volume of cement has been pumped that is equal to or greater than the combined volume of the well bore and the annular space within the isolated zone.
- b. <u>Injection Wells</u>: Injection wells plugged and abandoned in accordance with the procedures specified above will be deemed to have been plugged and abandoned in accordance with the provisions of 40 CFR 146.10. Therefore, Florence Copper will comply with the procedures specified above to ensure that any deviation from the above procedures will not violate the provisions of 40 CFR 146.10.

#### **E.3.5** Documentation and Reporting

Following completion of plugging and abandonment, reports will be prepared and filed with the respective agencies, as described below.

#### E.3.5.1 Reporting Responsibilities

The licensed driller or supervised designee will maintain a log of all abandonment activities. The log will be of sufficient detail that the driller will be able to complete all ADWR requirements and all abandonment reports required by USEPA. The driller will sign all ADWR abandonment forms. The authorized Florence Copper representative will sign all narrative abandonment reports submitted to ADWR and all abandonment reports to USEPA.

#### E.3.5.2 Reports to ADWR

The licensed driller will complete and sign a Well Abandonment Completion Report (ADWR Form 55-58) and submit it to ADWR within 30 days following abandonment of any well (including Class III wells) or

core hole. Form 55-58 will update the information provided on ADWR Form 55-38 (*Notice of Intent to Abandon a Well*) including updated information on the treatment, materials, and methods used for abandoning the well or core hole. Florence Copper will complete and sign a *Well Owner's Notification of Abandonment* (ADWR Form 55-36) and submit it to ADWR within 30 days following abandonment.

### E.3.5.3 Reports to USEPA

Within 60 days after plugging and abandoning a well or core hole or at the time of the next quarterly report due to the USEPA (whichever is less), Florence Copper will submit a report to the Regional Administrator of USEPA. If the quarterly report is due less than 15 days before plugging and abandonment is completed, then the report will be submitted within 60 days. The report will be certified as accurate by the licensed driller who performed the plugging and abandonment procedures.

The report will consist of either:

- A statement that the well or core hole was plugged and abandoned in accordance with the plan previously submitted to the Regional Administrator; or
- An updated version of the plan on Form 7520-19, specifying differences if the actual plugging or abandonment differed from the plan previously submitted.

The report will also include a summary of non-Class III wells and core holes abandoned and will include copies of all forms (Forms 55-38, 55-58, and 55-36) submitted to ADWR.

Completed copies of Form 7520-19 and schematic diagrams of wells, core holes, and shafts within the AOR are provided as Exhibit E-1 to this Attachment.

#### E.3.5.4 Reports to ADEQ

Florence Copper will include in its quarterly APP monitoring report to ADEQ a summary noting the identification number of each well or core hole for which abandonment was completed during the reporting period, the date that the abandonment was completed, and the location of the well or core hole.

Florence Copper will also submit to ADEQ a copy of the plugging and abandonment report developed for submittal to USEPA.

## E.3.5.5 Maintenance of Records

Copies of all completed and required abandonment report forms, plans, and narratives required by ADWR or USEPA will be maintained at the FCP site for inspection until closure is completed. After commencement of post-closure, the records will be stored by Florence Copper, subject to review by USEPA and ADEQ, until post-closure is completed.

#### **E.4 PLUGGING AND ABANDONMENT FORMS**

The planned ISCR well field area has been divided into resource blocks to aid in well field planning. Each resource block measures 500 feet by 500 feet and covers area of approximately 5.7 acres. Because resource characterization extended beyond the edge of the ISCR well field, the resource blocks also continue beyond the edge of the well field. The ISCR well field area boundary shown on Figures A-1 and A-2 (Attachment A of this Application) reflects the cutoff selected for copper recovery based on ore body characteristics. A total of 50 resource blocks fall either fully or partly inside the ISCR well field area. The proposed ISCR wells located within the ISCR well field are listed by resource block on Tables E-1 through E-50, provided in Exhibit E-1.

Each of the planned ISCR wells will be constructed based on site-specific geologic information developed during drilling and logging of the individual bore hole that the well will be constructed in. Specific information developed includes lithologic logging, caliper, gamma-ray, temperature, directional survey, and electrical logs. This information will be used to adjust the location of well seals, injection intervals, and eventually plugs based on this geologic information. By contrast, the well diagrams and plugging and abandonment forms (USEPA Form 7520-19) included in Exhibit E-1 reflect preliminary well designs based on core hole data, with interpolation in areas between core holes. The core hole information was also used to develop the resource blocks shown on Attachment A, Figures A-1 and A-2 of this Application. Based on the information presently available, the planned ISCR wells to be constructed in each resource block will be of a similar depth and will feature a similar seal interval and injection zone interval. Consequently, one plugging and abandonment form was prepared for each resource block. Each plugging and abandonment form includes one well diagram for injection and recovery wells, and another for perimeter and observation wells for blocks that include both types of wells. Coordinates for each well location are provided in tabular format (Tables E-1 through E-50) with each plugging and abandonment form (Exhibit E-1). Tables E-1 through E-50 include well information for a total of 1,757 injection and recovery wells, 87 perimeter wells, and 44 observation wells.

Corrective action will be taken to prevent the migration of injected fluids between or into USDWs within or adjacent to the AOR. Corrective action includes plugging and abandonment of all wells and core holes within the AOR, with the exception of Class III wells, prior to placing an injection well into operation within 500 feet of the well or core hole. The wells and core holes will be plugged and abandoned in accordance with this Plugging and Abandonment Plan. All non-Class III wells currently existing within the AOR, and which will be plugged and abandoned prior to injection within 500 feet, are listed in Table A-7. Plugging and abandonment forms (USEPA Form 7520-19) for each of the wells listed in Table A-7 are included in Exhibit E-2. Plugging and abandonment forms (USEPA Form 7520-19) for the two Conoco shafts are included in Exhibit E-2. All open core holes currently existing within the AOR and which will be plugged and abandoned prior to injection within 500 feet are listed in Table A-8. Plugging and abandonment forms (USEPA Form 7520-19) for each of the core holes listed in Table A-8 are included in Exhibit E-3. Plugging and abandonment forms (USEPA Form 7520-19) for the BHP Class III wells listed in Table A-6 are included in Exhibit E-4.

## **E.5 PLUGGING AND ABANDONMENT COST ESTIMATE**

A cost estimate for plugging and abandonment is included with the estimated closure and post-closure costs provided in Attachment F of this Application.

## **EXHIBIT E-1**

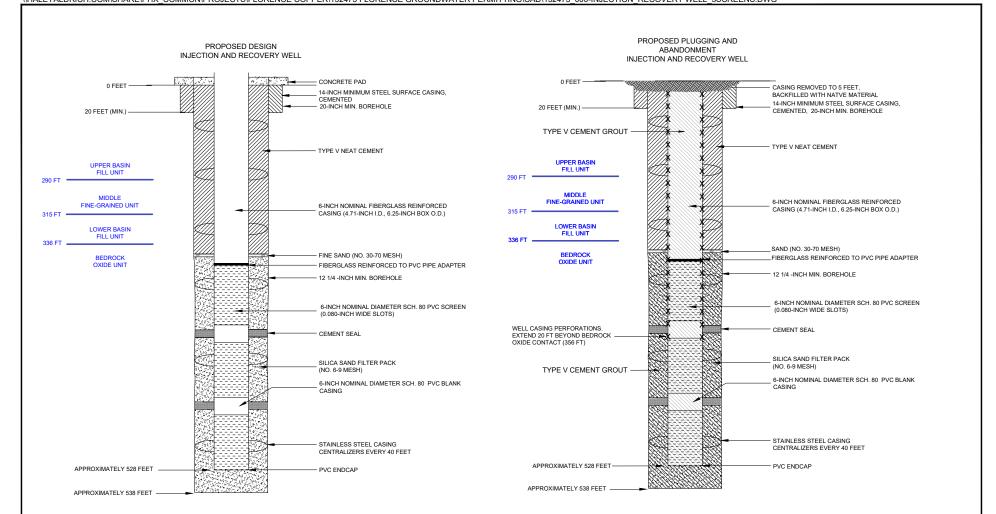
Form 7520-19, Schematic Diagrams of Planned Class III ISCR Wells by Resource Block

**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee									
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132									
Permit or EPA ID No	ımber	API Number		Full Well Name					
R9UIC-AZ3-FY1		Arrivalliber		Block 19 Wells - See A	ttached Table F_1				
State	1-1		0	Block 1) Wells - Sec 1	Attached Table E-1				
Arizona			Pinal						
Surface Location	directions from nearest lines of	quarter section and dr	Latitude 33	.053291					
SW 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.435439					
ft. fro	m (N/S) Line of quart	er section	··• 7L	See Attached Table for Individual Well Coordinates.					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class I	Notice Prior to Work			Well Rewo	rk				
Class II	Date Expected to Comme	nce January 2027							
✓ Class III				✓ Plugging a	nd Abandonment				
Class V	Report After Work			Conversion	n to a Non-Injection Well				
	Date Work Ended								
This plugging and wells, 1 dedicated C and will be used for field build-out. The screen.  The work performed	abandonment applies to wells class III observation, and 3 Class II injection and recovery on an altern dedicated perimeter observation will includes plugging and abandonme in Attachment E of the application	Class III wells to be of perimeter wells planned nate basis. Some of the invell will have a design and ent of the Class III wells in to modify UIC R9UIC-AZ3	onstructed in block 19. The for construction in this block. The highest of the injection and recovery wells will be depth similar to the injection and resource block 19. Plugging and FY11-1. Plugging and abandon	here are 11 Class III mult e injection and recovery wells e used as perimeter and obse nd recovery wells, but will no d abandonment will be accom	i-use injection/ recovery will be of uniform design, ervation wells prior to well at have a segmented well plished following				
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signature	9		Date Signed				
		_							
				J.					





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 19 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-1a

#### NOTES

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN ABANDONMENT OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT-TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE FINE-GRAINED UNIT FINE-GRAINED UNIT 315 FT 315 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT 336 FT 336 FT FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (356 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 528 FEET APPROXIMATELY 528 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 538 FEET APPROXIMATELY 538 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 19 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-1b

### **NOTES**

**TABLE E-1 WELLS WITHIN RESOURCE BLOCK 19**FLORENCE COPPER PROJECT
FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
566	847412	747121	19	336	376	528
567	847483	747192	19	336	376	528
583	847341	747050	19	336	376	528
873	847341	747121	19	336	376	528
874	847341	747192	19	336	376	528
875	847270	747121	19	336	376	528
921	847389	747205	19	336	376	528
922	847289	747205	19	336	376	528
923	847339	747255	19	336	376	528
569	847483	747121	19	336	376	528
587	847412	747050	19	336	376	528
001	847408	747389	19	336	376	528
P01	847337	747319	19	336	376	528
P02	847479	747319	19	336	376	528
P03	847695	747333	19	336	376	528

## Notes:

ft bgs = feet below ground surface

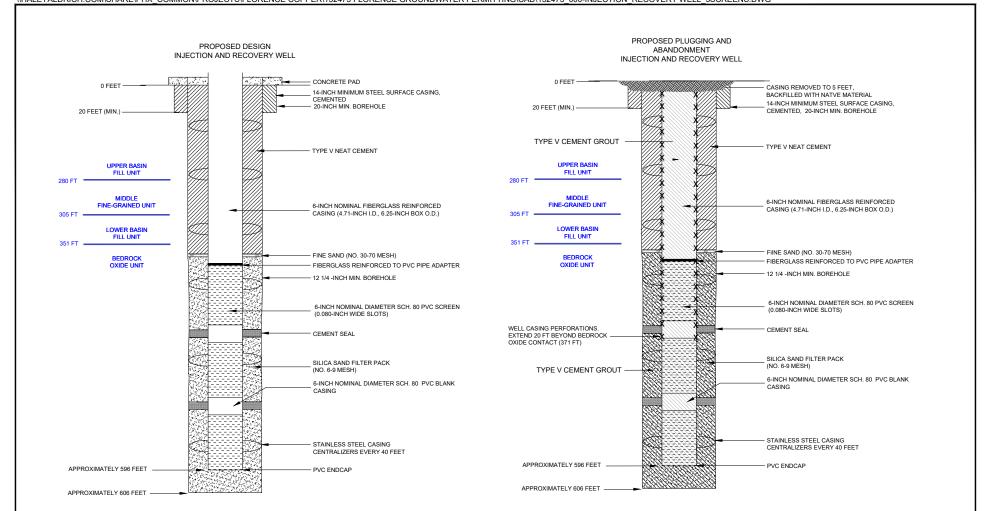




United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132										
Permit or EPA ID Nu	ımber	API Number		Full Well Name						
R9UIC-AZ3-FY1	1-1			Block 20 Wells - See A	ttached Table E-2					
State			County							
Arizona	Arizona									
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.052763						
Surface Location			Longitude _1	11.433440						
	m (N/S) Line of quart	er section	nge 9E	See Attached Table for Individual Well Coordinates.						
Well Class	Timing of Action (pick one)			Type of Action	(pick one)					
Class I	<b>√</b> Notice Prior to Work			Well Rewor	rk					
Class II	Date Expected to Comme	nce January 2027		✓ Plugging a	nd Abandonment					
✓ Class III	Report After Work									
Class V	Date Work Ended			Conversion	n to a Non-Injection Well					
This plugging and 2 dedicated Class II will be used for inject build-out. The dedication of the work performed	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 20. There are 6 Class III multi-use injection/ recovery wells, 2 dedicated Class III observation, and 3 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 20. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-2a									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)										
Name and Official T	itle (Please type or print)	Signature	9		Date Signed					





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 20 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-2a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN 280 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT LOWER BASIN LOWER BASIN FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 351 FT BEDROCK OXIDE UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (371 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 596 FEET APPROXIMATELY 596 FEET PVC ENDCAP PVC ENDCAP



APPROXIMATELY 606 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 20 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-2b

#### NOTES

APPROXIMATELY 606 FEET

TABLE E-2
WELLS WITHIN RESOURCE BLOCK 20

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
632	848119	747050	20	351	391	596
602	847978	747121	20	351	391	596
605	848190	747121	20	351	391	596
606	848048	747121	20	351	391	596
607	848119	747121	20	351	391	596
633	848048	747050	20	351	391	596
002	847765	747333	20	351	391	596
003	847978	747263	20	351	391	596
P05	847907	747192	20	351	391	596
P06	848048	747192	20	351	391	596
P07	848190	747192	20	351	391	596

## Notes:

ft bgs = feet below ground surface



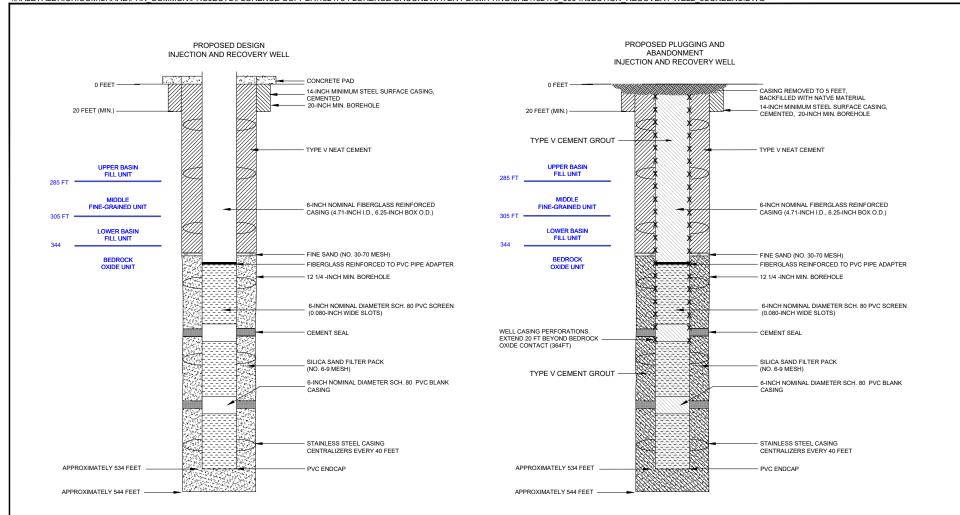
**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee						
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,							
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1		7.1.11.11.11.11.11.11.11.11.11.11.11.11.		Block 21 Wells - See A	ttached Table E-3			
State			County	Brook 21 Wells South	THE THE THE TE			
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.052742				
Surface Location			Longitudo	11.421170				
NE 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	longitude -11	11.431160				
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	✓ Notice Prior to Work			Well Rewo	rk			
Class II	Date Expected to Comme	Ince January 2027		Diversing a	ud Abaudaumant			
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work			Conversion	n to a Non-Injection Well			
	Date Work Ended							
This plugging and wells, 1 dedicated C and will be used for field build-out. The screen.	abandonment applies to wells lass III observation, and 3 Class II injection and recovery on an alter dedicated perimeter observation well includes plugging and abandonme in Attachment E of the application	Class III wells to be of perimeter wells planned nate basis. Some of the invell will have a design an ent of the Class III wells in	constructed in block 21.  for construction in this block. The njection and recovery wells will be depth similar to the injection a	There are 6 Class III mult e injection and recovery wells e used as perimeter and obsend recovery wells, but will no dabandonment will be accom	i-use injection/ recovery will be of uniform design, ervation wells prior to well of have a segmented well uplished following			
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	<u> </u>		Date Signed			
	, y, py							

\\HALEYALDRICH.COM\SHARE\PHX COMMONIPROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-INJECTION RECOVERY WELL 3SCREENS.DWG





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 21 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-3a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 20 FEET (MIN.) 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE FINE-GRAINED UNIT FINE-GRAINED UNIT 305 FT 305 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT · 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT 344 FT - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (364 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 534 FEET PVC ENDCAP APPROXIMATELY 534 FEET PVC ENDCAP APPROXIMATELY 544 FEET APPROXIMATELY 544 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 21 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-3b

#### NOTES

TABLE E-3
WELLS WITHIN RESOURCE BLOCK 21

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
11	848826	747050	21	344	384	534
6	848755	747051	21	344	384	534
8	848897	747121	21	344	384	534
10	848826	747121	21	344	384	534
132	848754	747121	21	344	384	534
133	848684	747121	21	344	384	534
O05	848755	747263	21	344	384	534
P09	848685	747192	21	344	384	534
P10	848826	747192	21	344	384	534
P11	848967	747192	21	344	384	534

## Notes:

ft bgs = feet below ground surface

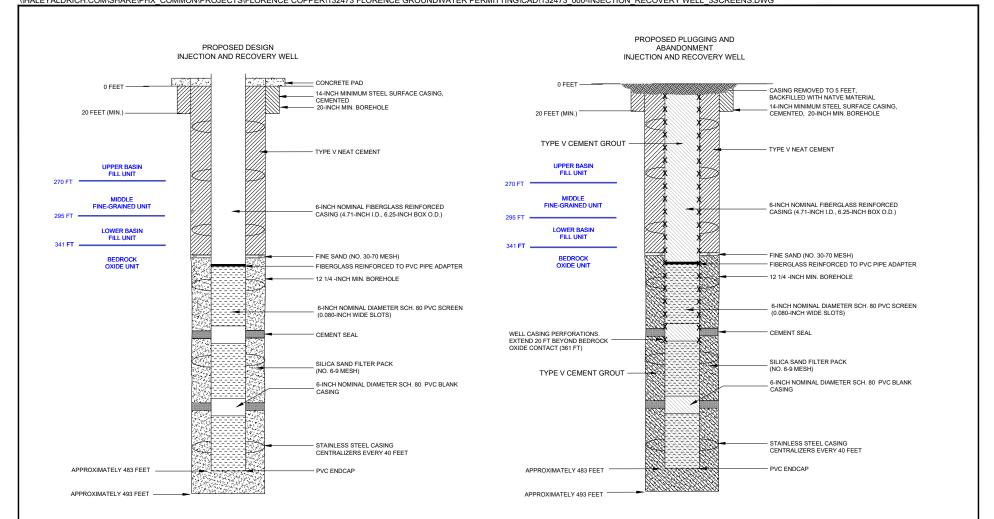


**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee										
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132										
Permit or EPA ID Nu	ımber	API Number		Full Well Name						
R9UIC-AZ3-FY1	1-1			Block 22 Wells - See A	Attached Table E-4					
State			County							
Arizona										
Locate well in two	Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.052757									
Surface Location			Longitude _1	11.428766						
	n (N/S) Line of quart	er section	nge 9E	See Attached Table for Individual Well Coordinates.						
Well Class	Timing of Action (pick one)			Type of Action	(pick one)					
Class I Class II Class III Class V	Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well					
This plugging and recovery wells, 2 de uniform design, and wells prior to well fie segmented well screet.	abandonment applies to well dicated Class III observation, and will be used for injection and receiled build-out. The dedicated perimen.  Includes plugging and abandonment Attachment E of the application	Is Class III wells to d 3 Class III perimeter we overy on an alternate basieter observation well will ent of the Class III wells in to modify UIC R9UIC-AZ3	be constructed in block 22.  Begin planned for construction in the second of the injection and received a design and depth similar of the second of the seco	There are 4 Class this block. The injection and covery wells will be used as put to the injection and recovery displayed abandonment will be accomment.	III multi-use injection/ recovery wells will be of terimeter and observation wells, but will not have a					
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signature	9		Date Signed					





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 22 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-4

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V NEAT CEMENT TYPE V CEMENT GROUT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE 270 FT MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 295 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT 341 FT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER OXIDE UNIT WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (361 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 483 FEET APPROXIMATELY 483 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 493 FEET APPROXIMATELY 493 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 22 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-4b

#### NOTES

## TABLE E-4 WELLS WITHIN RESOURCE BLOCK 22

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
301	849533	747050	22	341	381	483
302	849604	747121	22	341	381	483
313	849533	747121	22	341	381	483
314	849462	747050	22	341	381	483
007	849322	747263	22	341	381	483
008	849605	747263	22	341	381	483
P14	849393	747192	22	341	381	483
P15	849534	747192	22	341	381	483
P16	849675	747192	22	341	381	483

## Notes:

ft bgs = feet below ground surface

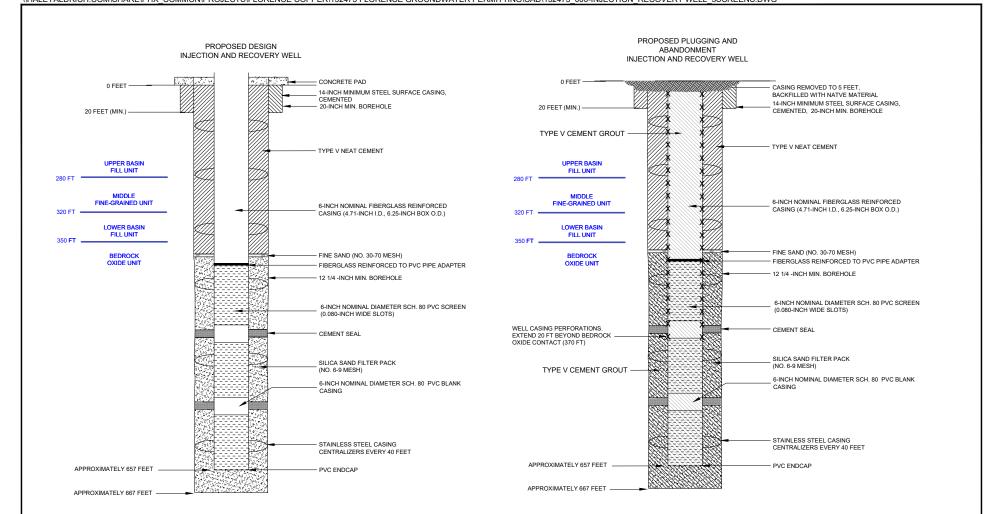


**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee									
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132									
Permit or EPA ID Nu	ımber	API Number		Full Well Name					
R9UIC-AZ3-FY1	1-1			Block 27 Wells - See A	Attached Table E-5				
State			County						
Arizona Pinal									
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.052352									
Surface Location			Longitude -11	11 436308					
NW 1/4 of SV	1/4 of Section 28	Township 4S Ra	nge 9E						
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk				
Class II	Date Expected to Comme	nce January 2027		/ Plugging a	nd Abandonment				
✓ Class III				▼ Flugging a	na Abanaonment				
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well				
This plugging an injection/ recovery wells will be of unit and observation wel will not have a segm	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 27. There are 16 Class III multi-use injection/ recovery wells, 2 dedicated Class III observation, and 5 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 27. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-5a								
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signature	)		Date Signed				





### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 27 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-5a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 320 FT LOWER BASIN FILL UNIT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 350 FT 350 FT -- FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (356 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 657 FEET APPROXIMATELY 657 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 667 FEET APPROXIMATELY 667 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 27 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-5b

#### **NOTES**

# TABLE E-5 WELLS WITHIN RESOURCE BLOCK 27 FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Depth to Top of Depth to Top of Depth to Bottom of Well Resource **Injection Zone Easting Northing Bedrock Injection Zone** Number **Block** (ft bgs) (ft bgs) (ft bgs) P83 P84 P85 P86 P87 

### Notes:

ft bgs = feet below ground surface



OMB No. 2040-0042

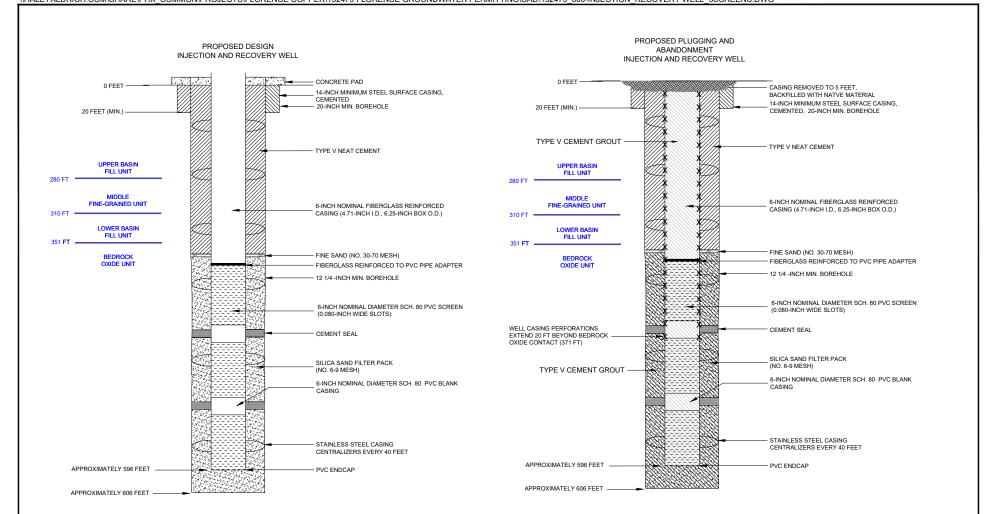
Approval Expires 4/30/2022

**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address,	Phone Number and/or Email of	Permittee						
Florence Copper I 1575 W Hunt Hw Florence, AZ 8513	y,							
Permit or EPA ID N	umber	API Numbe	er			Full W	/ell Name	
R9UIC-AZ3-FY1	1-1					Block	28 Wells - See A	Attached Table E-6
State				County				
Arizona				Pinal				
Locate well in two	directions from nearest lines o	of quarter sect	ion and dr	illing unit	Latitude	33.052554	1	
Surface Location					Lampituda [	111 1216	2.4	_
NE 1/4 of SV	W 1/4 of Section 28	Township 45	S Ra	inge 9E	Longitude .	-111.4346	24	
	m (N/S) Line of quar						ached Table vidual Well nates.	
Well Class	Timing of Action (pick one)						Type of Action	(pick one)
Class I	✓ Notice Prior to Work						Well Rewo	rk
Class II	Date Expected to Comm	ence Januar	y 2027					
✓ Class III							✓ Plugging a	and Abandonment
Class V	Report After Work			_			Conversion	n to a Non-Injection Well
	Date Work Ended							
This plugging and dedicated Class III recovery on an alte observation well will The work performed	abandonment applies to wells Clobservation well planned for consumate basis. Some of the injectical have a design and depth similar dincludes plugging and abandonmin Attachment E of the application	lass III wells to truction in this on and recovery to the injection ment of the Clas	be construction be construction. The construction is the construction of the construction in the construction is the construction of the construction in the construction is the construction of the construction in the construction is the construction of the construction in the construction is the construction of the construct	ucted in block injection and in be used as per ry wells, but we resource bloods S-FY11-1. Plug	28. There and recovery wells we rimeter and obsidil not have a second ck 28. Plugging at the control of the con	re 49 Class ill be of unit servation we gmented we and abando	s III multi-use injecti form design, and will ells prior to well field Il screen.	on/ recovery wells and 1 lbe used for injection and lbuild-out. The dedicated
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official 1	Title (Please type or print)		Signatur	e				Date Signed
	. ,		-					
			1					





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 28 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-6a

### NOTES

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 310 FT 310 FT • LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING BEDROCK - FINE SAND (NO. 30-70 MESH) BEDROCK - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER OXIDE UNIT - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (371 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 596 FEET APPROXIMATELY 596 FEET PVC ENDCAP PVC ENDCAP



APPROXIMATELY 606 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 28 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-6b

#### NOTES

APPROXIMATELY 606 FEET

## TABLE E-6 WELLS WITHIN RESOURCE BLOCK 28

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock Injection Zone (ft bgs) (ft bgs)		Depth to Bottom of Injection Zone (ft bgs)
517	847695	746697	28	351	391	596
570	847624	747121	28	351	391	596
568	847553	747121	28	351	391	596
571	847624	747192	28	351	391	596
575	847553	746838	28	351	391	596
578	847483	746909	28	351	391	596
581	847412	746980	28	351	391	596
585	847553	747050	28	351	391	596
586	847483	747050	28	351	391	596
588	847553	746980	28	351	391	596
705	847622	747255	28	351	391	596
703	847672	747205	28	351	391	596
704	847572	747205	28	351	391	596
634	848048	746980	28	351	391	596
631	847978	746909	28	351	391	596
630	847907	746980	28	351	391	596
629	847978	746980	28	351	391	596
628	847836	747050	28	351	391	596
627	847907	747050	28	351	391	596
626	847978	747050	28	351	391	596
625	847695	747050	28	351	391	596
624	847695	746980	28	351	391	596
623	847765	747050	28	351	391	596
622	847695	746838	28	351	391	596
621	847765	746909	28	351	391	596
619	847765	746980	28	351	391	596
620	847836	746980	28	351	391	596
618	847695	746909	28	351	391	596
617	847765	746768	28	351	391	596
589	847483	746980	28	351	391	596
590	847553	746909	28	351	391	596
591	847624	746768	28	351	391	596
593	847625	746837	28	351	391	596
594	847624	746909	28	351	391	596
595	847624	747050	28	351	391	596
596	847624	746980	28	351	391	596
597	847836	747121	28	351	391	596
599	847765	747121	28	351	391	596
600	847765	747192	28	351	391	596



## TABLE E-6 WELLS WITHIN RESOURCE BLOCK 28

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
601	847695	747121	28	351	391	596
603	847907	747121	28	351	391	596
610	847836	746768	28	351	391	596
609	847765	746697	28	351	391	596
611	847907	746838	28	351	391	596
612	847695	746768	28	351	391	596
613	847765	746838	28	351	391	596
614	847836	746909	28	351	391	596
615	847907	746909	28	351	391	596
616	847836	746838	28	351	391	596
P04	847765	747263	28	351	391	596

## Notes:

ft bgs = feet below ground surface

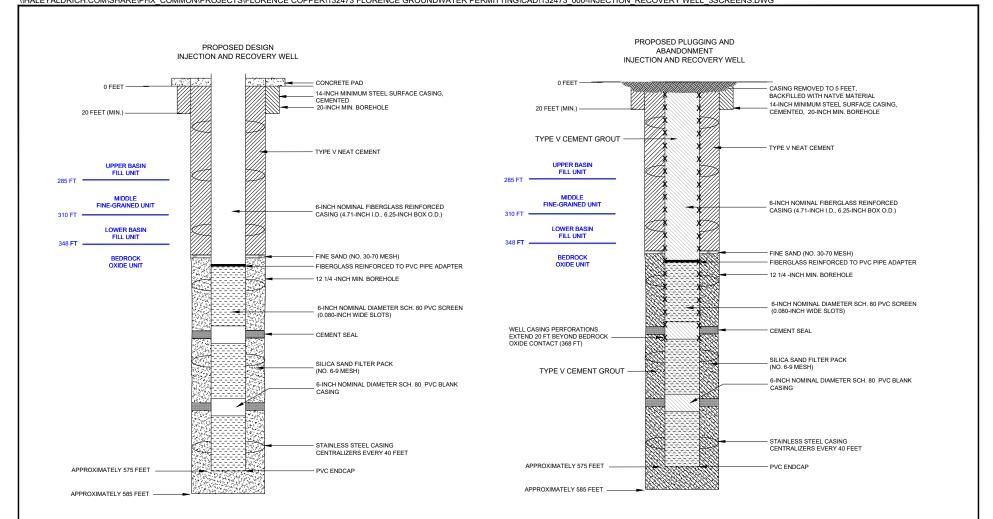


**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Nu	ımber	API Number	Full Well Name				
R9UIC-AZ3-FY11-1				Block 29 Wells - See A	k 29 Wells - See Attached Table E-7		
State			County				
Arizona			Pinal				
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.052289							
Surface Location							
NE 1/4 of SV	/ 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.432285			
See Attached Table   See Att							
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	January 2027			rk nd Abandonment n to a Non-Injection Well		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 29. There are 35 Class III multiuse injection/ recovery wells, 1 dedicated Class III observation, and 1 Class III perimeter wells planned for construction in this block. The injection and recovery nells will be of uniform design, and will be used for injection and recovery on alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 29. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-7a and E-7b.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signa	ture		Date Signed		





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 29 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-7a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 285 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 348 FT 348 FT BEDROCK OXIDE UNIT FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (368 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 575 FEET APPROXIMATELY 575 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 585 FEET APPROXIMATELY 585 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 29 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-7b

#### NOTES

## TABLE E-7 WELLS WITHIN RESOURCE BLOCK 29

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well	Easting	Northing	Resource	Depth to Top of Bedrock	Depth to Top of Injection Zone	Depth to Bottom of Injection Zone
Number	Lusting	, working	Block	(ft bgs)	(ft bgs)	(ft bgs)
1	848614	746838	29	348	388	575
2	848614	746909	29	348	388	575
3	848557	746838	29	348	388	575
4	848685	746980	29	348	388	575
5	848685	746909	29	348	388	575
7	848755	746980	29	348	388	575
131	848684	747050	29	348	388	575
635	848260	747121	29	348	388	575
643	848543	746768	29	348	388	575
646	848543	746909	29	348	388	575
651	848331	746838	29	348	388	575
652	848402	746909	29	348	388	575
653	848472	746980	29	348	388	575
654	848543	746980	29	348	388	575
656	848369	746838	29	348	388	575
655	848508	746934	29	348	388	575
657	848331	746768	29	348	388	575
662	848331	746909	29	348	388	575
660	848472	747050	29	348	388	575
661	848402	746980	29	348	388	575
663	848260	746838	29	348	388	575
668	848260	746909	29	348	388	575
669	848331	746980	29	348	388	575
670	848331	747050	29	348	388	575
671	848260	746980	29	348	388	575
672	848190	746909	29	348	388	575
684	848260	747050	29	348	388	575
685	848190	747050	29	348	388	575
686	848190	746980	29	348	388	575
687	848119	746980	29	348	388	575
688	848614	747050	29	348	388	575
689	848614	746980	29	348	388	575
709	848521	747064	29	348	388	575
710	848421	747064	29	348	388	575
711	848471	747114	29	348	388	575
004	848331	747263	29	348	388	575
P08	848473	747192	29	348	388	575

## Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132								
Permit or EPA ID No	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY11-1				Block 30 Wells - See A	k 30 Wells - See Attached Table E-8			
State			County					
Arizona			Pinal					
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.052368								
Surface Location			Lamaticala d	11 120006				
NW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.429986				
See Attached Table for Individual Well Coordinates.  ft. from (E/W)  Line of quarter section.								
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk			
Class II	Date Expected to Comme	January 2027		/ Plugging a	nd Abandonment			
✓ Class III				V Hagging a	na Abanaoninent			
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well			
	Date Work Elided							
This plugging and abandonment applies to wells Class III wells to be constructed in block 30. There are 44 Class III multi-use injection/ recovery wells, 1 dedicated Class III observation, and 2 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 30. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-8a and E-8b.								
		2:	utification					
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatu	ire		Date Signed			
	,				_			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

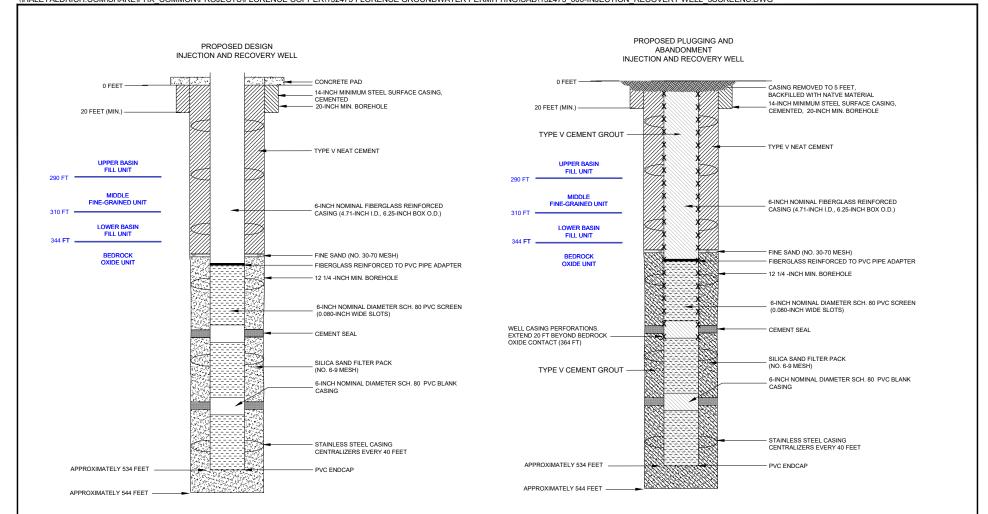
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 30 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-8a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 310 FT LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 344 FT BEDROCK - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (364 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 534 FEET APPROXIMATELY 534 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 544 FEET APPROXIMATELY 544 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 30 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-8b

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-8 WELLS WITHIN RESOURCE BLOCK 30 FLORENCE COPPER PROJECT

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
28	848967	747121	30	344	384	534
30	849109	747121	30	344	384	534
31	849038	747121	30	344	384	534
36	849321	747121	30	344	384	534
37	849180	747121	30	344	384	534
38	849250	747121	30	344	384	534
41	849109	746768	30	344	384	534
48	849038	746838	30	344	384	534
49	849109	746838	30	344	384	534
50	849038	746768	30	344	384	534
56	848967	746909	30	344	384	534
62	848897	746980	30	344	384	534
63	848967	746980	30	344	384	534
64	848897	746909	30	344	384	534
66	848897	747050	30	344	384	534
67	848826	746980	30	344	384	534
68	849109	747050	30	344	384	534
70	848967	747050	30	344	384	534
69	849038	747050	30	344	384	534
57	849038	746909	30	344	384	534
58	848967	746838	30	344	384	534
71	849109	746980	30	344	384	534
72	849038	746980	30	344	384	534
73	849109	746909	30	344	384	534
75	849180	746837	30	344	384	534
76	849250	746909	30	344	384	534
77	849180	746909	30	344	384	534
78	849392	747050	30	344	384	534
79	849321	747050	30	344	384	534
80	849250	747050	30	344	384	534
82	849321	746980	30	344	384	534
81	849180	747050	30	344	384	534
83	849250	746980	30	344	384	534
84	849180	746980	30	344	384	534
295	849250	746768	30	344	384	534
296	849321	746838	30	344	384	534
297	849392	746909	30	344	384	534
298	849462	746980	30	344	384	534
300	849180	746697	30	344	384	534



# TABLE E-8 WELLS WITHIN RESOURCE BLOCK 30

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
315	849392	746980	30	344	384	534
317	849250	746838	30	344	384	534
316	849321	746909	30	344	384	534
318	849180	746768	30	344	384	534
319	849109	746697	30	344	384	534
O06	849038	747263	30	344	384	534
P12	849109	747192	30	344	384	534
P13	849251	747192	30	344	384	534

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address,	Phone Number and/or Email of P	ermittee							
Florence Copper I 1575 W Hunt Hw Florence, AZ 851	y,								
Permit or EPA ID N	umber	API Number		Full Well Name					
R9UIC-AZ3-FY1				Block 31 Wells - See A	attached Table E-9				
State			County	Broth DT Wells See 1.	Tueste L				
Arizona County Pinal									
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.052432									
Surface Location			Longitudo	11 420117					
NW 1/4 of SI	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -1	11.428116					
	m (N/S) Line of quart m (E/W) Line of quart			See Attached Table for Individual Well Coordinates.					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class I	✓ Notice Prior to Work			Well Rewo	rk				
Class II	Date Expected to Comme	nce January 2027		Diversion a	ud Abaudaumant				
✓ Class III	_			✓ Plugging a	nd Abandonment				
Class V	Report After Work			Conversion	n to a Non-Injection Well				
	Date Work Ended								
This plugging ar use injection/ recovery wells will used as perimeter recovery wells, but the work performed	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 31. There are 20 Class III multiuse injection/ recovery wells, 3 dedicated Class III observation, and 3 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 31. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-9a								
attachments a information is	the penalty of law that I have p and that, based on my inquiry o true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the				
Name and Official 1	Title (Please type or print)	Signature	9		Date Signed				
	, 21 · · · · · · · · · · · · · · · · · ·								
T. Control of the Con									

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

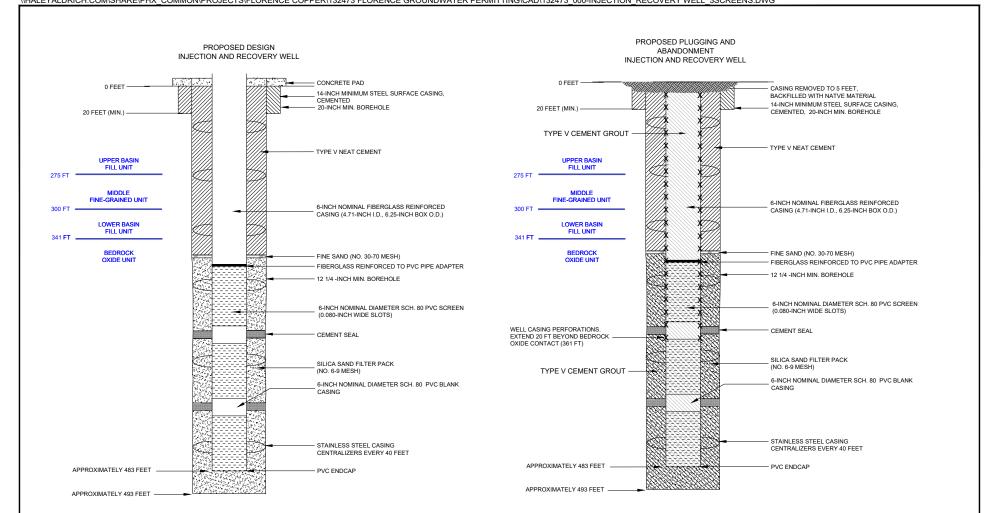
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 31 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-9

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 275 FT ' 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 341 FT ... BEDROCK - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (361 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 483 FEET APPROXIMATELY 483 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 493 FEET APPROXIMATELY 493 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC
RESOURCE BLOCK 31
OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-9b

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

TABLE E-9
WELLS WITHIN RESOURCE BLOCK 31
FLORENCE COPPER PROJECT
FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
137	849674	747121	31	341	381	483
139	849816	747121	31	341	381	483
140	849745	747121	31	341	381	483
144	849816	746697	31	341	381	483
152	849745	746838	31	341	381	483
154	849745	746768	31	341	381	483
162	849674	746909	31	341	381	483
163	849745	746909	31	341	381	483
164	849674	746838	31	341	381	483
173	849604	746980	31	341	381	483
174	849674	746980	31	341	381	483
175	849604	746909	31	341	381	483
180	849604	747050	31	341	381	483
181	849533	746980	31	341	381	483
191	849745	747050	31	341	381	483
192	849674	747050	31	341	381	483
193	849816	746980	31	341	381	483
194	849745	746980	31	341	381	483
303	849887	746697	31	341	381	483
327	849887	747121	31	341	381	483
009	849888	747263	31	341	381	483
010	849957	747050	31	341	381	483
011	849957	746838	31	341	381	483
P17	849817	747192	31	341	381	483
P18	849958	747192	31	341	381	483
P19	849887	746980	31	341	381	483
P20	849887	746768	31	341	381	483

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address,	Phone Number and/or Email of P	ermittee							
Florence Copper I 1575 W Hunt Hw Florence, AZ 851	y,								
Permit or EPA ID N	umber	API Number		Full Well Name					
R9UIC-AZ3-FY1				Block 31 Wells - See A	attached Table E-9				
State			County	Broth DT Wells See 1.	Tueste L				
Arizona County Pinal									
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.052432									
Surface Location			Longitudo	11 420117					
NW 1/4 of SI	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -1	11.428116					
	m (N/S) Line of quart m (E/W) Line of quart			See Attached Table for Individual Well Coordinates.					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class I	✓ Notice Prior to Work			Well Rewo	rk				
Class II	Date Expected to Comme	nce January 2027		Diversion a	ud Abaudaumant				
✓ Class III	_			✓ Plugging a	nd Abandonment				
Class V	Report After Work			Conversion	n to a Non-Injection Well				
	Date Work Ended								
This plugging ar use injection/ recovery wells will used as perimeter recovery wells, but the work performed	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 31. There are 20 Class III multiuse injection/ recovery wells, 3 dedicated Class III observation, and 3 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 31. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-9a								
attachments a information is	the penalty of law that I have p and that, based on my inquiry o true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the				
Name and Official 1	Title (Please type or print)	Signature	9		Date Signed				
	, 21 · · · · · · · · · · · · · · · · · ·								
T. Control of the Con									

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

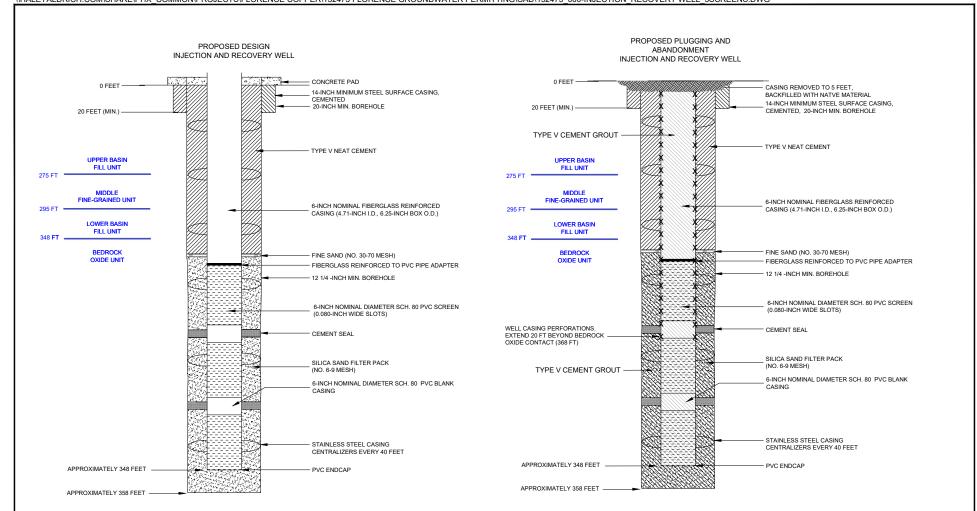
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 32 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-10a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN ABANDONMENT OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET 14-INCH MIN. STEEL SURFACE CASING, CASING REMOVED TO 5 FEET, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDI F FINE-GRAINED UNIT FINE-GRAINED UNIT 295 FT -295 FT LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (368 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET PVC ENDCAP PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK



APPROXIMATELY 358 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 32 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-10b

#### NOTES

APPROXIMATELY 358 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-10 WELLS WITHIN RESOURCE BLOCK 32

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
326	850523	746697	32	348	388	491
013	850523	746838	32	348	388	491
014	850664	746626	32	348	388	491
P24	850452	746768	32	348	388	491
P25	850594	746768	32	348	388	491
P26	850594	746697	32	348	388	491

#### Notes:

ft bgs = feet below ground surface Based on depths in block 40



OMB No. 2040-0042

Approval Expires 4/30/2022

**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address I	Phone Number and/or Email of P	ormittee	AID ADAILDONNE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	erminee			
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1		Airivamber		Block 36 Wells - See A	ttached Table F_11
	1-1			DIOCK 30 WEIIS - SEE A	ttached Table E-11
State Arizona			Pinal		
Surface Location  NW 1/4 of SV  ft. from	m (N/S) Line of quart	Township 4S R	- Latitude 33	.051514  11.435765  See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application	ion and recovery wells d recovery wells will be ent of the Class III wells i	will be of uniform design, and used as perimeter and observation or resource block 36. Plugging and	d will be used for injectio on wells prior to well field buil d abandonment will be accom	n and recovery d-out. plished following
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined an f those individuals imn I am aware that there a	nediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatu	'e		Date Signed
Tame and official I	(eace Gpe or printy	Joignatu	· <del>-</del>		- 5.55 - 5.9.104

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

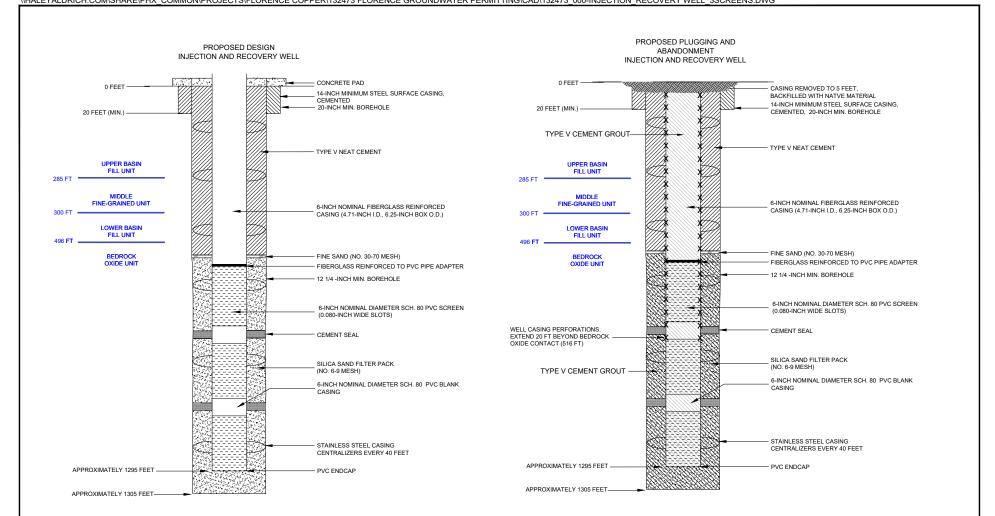
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 36 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-11

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-11 WELLS WITHIN RESOURCE BLOCK 36 FLORENCE COPPER PROJECT

FLORENCE, ARIZONA

Well			Resource	Depth to Top of	Depth to Top of	Depth to Bottom of
Number	Easting	Northing	Block	Bedrock (ft bgs)	Injection Zone (ft bgs)	Injection Zone (ft bgs)
514	847624	746556	36	496	536	1295
515	847624	746626	36	496	536	1295
516	847695	746626	36	496	536	1295
518	847553	746555	36	496	536	1295
520	847412	746343	36	496	536	1295
521	847412	746414	36	496	536	1295
522	847341	746343	36	496	536	1295
523	847553	746485	36	496	536	1295
524	847483	746485	36	496	536	1295
525	847483	746414	36	496	536	1295
572	847553	746697	36	496	536	1295
573	847553	746768	36	496	536	1295
574	847483	746838	36	496	536	1295
576	847483	746768	36	496	536	1295
577	847412	746909	36	496	536	1295
579	847412	746838	36	496	536	1295
582	847341	746909	36	496	536	1295
592	847624	746697	36	496	536	1295
715	847483	746697	36	496	536	1295
716	847412	746768	36	496	536	1295
717	847341	746838	36	496	536	1295
726	847412	746555	36	496	536	1295
727	847483	746626	36	496	536	1295
728	847412	746626	36	496	536	1295
729	847341	746555	36	496	536	1295
730	847200	746555	36	496	536	1295
731	847270	746626	36	496	536	1295
732	847341	746697	36	496	536	1295
733	847412	746697	36	496	536	1295
734	847341	746626	36	496	536	1295
735	847270	746555	36	496	536	1295
736	847129	746626	36	496	536	1295
737	847200	746697	36	496	536	1295
738	847270	746768	36	496	536	1295
774	847553	746626	36	496	536	1295
773	847412	746485	36	496	536	1295
765	847200	746485	36	496	536	1295
764	847270	746485	36	496	536	1295
756	847270	746414	36	496	536	1295



# TABLE E-11 WELLS WITHIN RESOURCE BLOCK 36

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
755	847341	746485	36	496	536	1295
754	847341	746414	36	496	536	1295
749	847483	746555	36	496	536	1295
746	847058	746626	36	496	536	1295
745	847129	746697	36	496	536	1295
744	847200	746768	36	496	536	1295
743	847270	746838	36	496	536	1295
742	847129	746555	36	496	536	1295
741	847200	746626	36	496	536	1295
740	847270	746697	36	496	536	1295
739	847341	746768	36	496	536	1295

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee									
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,								
		T		T					
Pollic A 72 EVA		API Number		Full Well Name	1 TE 11 E 10				
R9UIC-AZ3-FY1	1-1			Block 37 Wells - See A	ttached Table E-12				
State Arizona			County						
Alizolia			Pinal						
Locate well in two	Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.051518								
Surface Location			Longitude _1	11 433408					
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E						
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class I	Notice Prior to Work			Well Rewo	·k				
Class II	Date Expected to Comme	January 2027	7	Diversion of					
✓ Class III				✓ Plugging a	nd Abandonment				
Class V	Report After Work			Conversion	n to a Non-Injection Well				
	Date Work Ended								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 37. There are 49 Class III multi-use injection/ recovery wells, planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out.  The work performed includes plugging and abandonment of the Class III wells in resource block 37. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figure E-12.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Sign	ature		Date Signed				

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

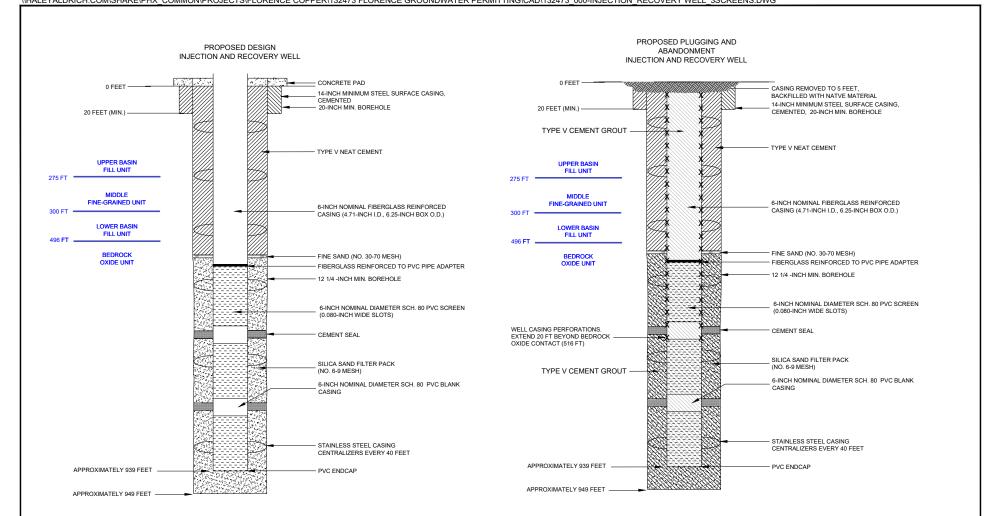
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 37 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-12

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-12 WELLS WITHIN RESOURCE BLOCK 37 FLORENCE COPPER PROJECT

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
333	848260	746556	37	496	536	939
334	848260	746485	37	496	536	939
335	848190	746485	37	496	536	939
336	848190	746414	37	496	536	939
337	848119	746343	37	496	536	939
338	848048	746343	37	496	536	939
339	848119	746414	37	496	536	939
538	847836	746555	37	496	536	939
540	847765	746626	37	496	536	939
561	847907	746485	37	496	536	939
563	847977	746414	37	496	536	939
636	847977	746697	37	496	536	939
637	847978	746768	37	496	536	939
638	847907	746697	37	496	536	939
639	847978	746838	37	496	536	939
640	847907	746768	37	496	536	939
641	847977	746626	37	496	536	939
642	848315	746556	37	496	536	939
644	848260	746626	37	496	536	939
645	848331	746697	37	496	536	939
648	848331	746626	37	496	536	939
649	848190	746697	37	496	536	939
650	848260	746768	37	496	536	939
658	848260	746697	37	496	536	939
659	848190	746626	37	496	536	939
664	848190	746768	37	496	536	939
665	848119	746697	37	496	536	939
666	848119	746768	37	496	536	939
667	848190	746838	37	496	536	939
673	848119	746838	37	496	536	939
674	848048	746768	37	496	536	939
675	848190	746556	37	496	536	939
676	848048	746556	37	496	536	939
677	848119	746556	37	496	536	939
678	848119	746626	37	496	536	939
679	848048	746626	37	496	536	939
680	848048	746697	37	496	536	939
681	848049	746837	37	496	536	939
682	848119	746909	37	496	536	939



# TABLE E-12 WELLS WITHIN RESOURCE BLOCK 37

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
683	848048	746909	37	496	536	939
690	848119	746485	37	496	536	939
691	847907	746626	37	496	536	939
692	847836	746626	37	496	536	939
693	847836	746697	37	496	536	939
694	847977	746555	37	496	536	939
695	847907	746555	37	496	536	939
696	847977	746485	37	496	536	939
697	848048	746485	37	496	536	939
698	848048	746414	37	496	536	939

### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	ermittee					
Permit or EPA ID Nu	ımhor	ADI Number		Full Well Name			
		API Number					
R9UIC-AZ3-FY1	1-1			Block 38 Wells - See A	Attached Table E-13		
State			County				
Arizona			Pinal				
Locate well in two of Surface Location	directions from nearest lines of	quarter section and o	drilling unit Latitude 33	.051569			
	V 1/4 of Section 28	Township 4G	Longitude _1	11.431269			
ft. fro	m (N/S) Line of quarter Line of quarter	er section	Range 9E	See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  ✓ Class III  Class V	Notice Prior to Work Date Expected to Comme  Report After Work Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well		
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application	ion and recovery well d recovery wells will be ent of the Class III wells	s will be of uniform design, an e used as perimeter and observat in resource block 38. Plugging ar	d will be used for injection wells prior to well field built abandonment will be accomed.	n and recovery d-out. nplished following		
		_	.416141				
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatu	ire		Date Signed		
	,						

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

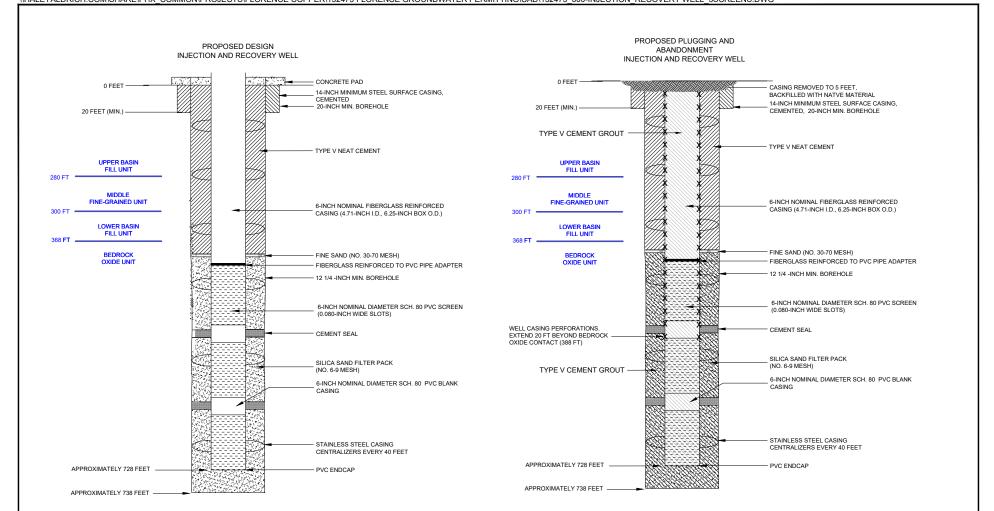
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 38 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-13

# TABLE E-13 WELLS WITHIN RESOURCE BLOCK 38 FLORENCE COPPER PROJECT

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
12	848614	746626	38	368	408	728
13	848685	746697	38	368	408	728
14	848685	746768	38	368	408	728
15	848614	746697	38	368	408	728
16	848685	746838	38	368	408	728
17	848614	746768	38	368	408	728
18	848543	746697	38	368	408	728
19	848685	746556	38	368	408	728
20	848685	746626	38	368	408	728
21	848755	746768	38	368	408	728
22	848755	746556	38	368	408	728
23	848755	746626	38	368	408	728
24	848755	746697	38	368	408	728
25	848756	746838	38	368	408	728
26	848755	746909	38	368	408	728
27	848755	746485	38	368	408	728
32	849462	747121	38	368	408	728
34	849392	747121	38	368	408	728
40	848967	746555	38	368	408	728
42	849038	746697	38	368	408	728
43	848967	746626	38	368	408	728
44	848897	746555	38	368	408	728
45	848826	746626	38	368	408	728
46	848897	746697	38	368	408	728
47	848967	746768	38	368	408	728
51	848967	746697	38	368	408	728
52	848897	746626	38	368	408	728
53	848826	746555	38	368	408	728
54	848826	746768	38	368	408	728
55	848897	746838	38	368	408	728
59	848897	746768	38	368	408	728
60	848826	746697	38	368	408	728
61	848826	746909	38	368	408	728
65	848826	746838	38	368	408	728
74	849038	746555	38	368	408	728
85	848826	746343	38	368	408	728
86	848897	746414	38	368	408	728
87	848897	746485	38	368	408	728
88	848826	746414	38	368	408	728



# TABLE E-13 WELLS WITHIN RESOURCE BLOCK 38

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
89	848826	746485	38	368	408	728
90	848967	746485	38	368	408	728
91	848755	746343	38	368	408	728
299	849109	746626	38	368	408	728
312	849038	746626	38	368	408	728
340	848614	746556	38	368	408	728
341	848685	746485	38	368	408	728
342	848755	746414	38	368	408	728
343	848543	746556	38	368	408	728
385	848614	746485	38	368	408	728
387	848685	746414	38	368	408	728
700	848543	746626	38	368	408	728
701	848495	746556	38	368	408	728
702	848504	746626	38	368	408	728

#### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	J. III.					
Permit or EPA ID Nu	ımhay	API Number			Full Well Name		
R9UIC-AZ3-FY1		API Number			Block 39 Wells - See A	tto ah ad Tahla E 14	
	1-1				Block 39 Wells - See A	ttached Table E-14	
Arizona			County Pinal				
Locate well in two	directions from nearest lines of	quarter section and	l drilling unit	Latitude 33	.051457		
Surface Location							
	1/4 of Section 28	Township 4S	Range 9E	ongitude -11	1.428830		
NW 1/4 of SE	174 of Section 28	Township 45	Kange 9E		See Attached Table		
ft fro	m (N/S) Line of quarte	or soction			for Individual Well		
					Coordinates.		
π. iro	m (E/W) Line of quarte	er section.					
Well Class	Timing of Action (pick one)				Type of Action	(pick one)	
Class I	✓ Notice Prior to Work				Well Rewo	rk	
Class II	Date Expected to Comme	nce January 2027					
✓ Class III					✓ Plugging a	nd Abandonment	
Class V	Report After Work				Conversion	n to a Non-Injection Well	
Class V	Date Work Ended						
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application t	on and recovery wells will ent of the Class III wel	ells will be of uniforr be used as perimeter Is in resource block 39	m design, and and observation observation.  9. Plugging and	d will be used for injection wells prior to well field built data abandonment will be accomed.	n and recovery d-out. aplished following	
		C	ertification				
CERTITICATION  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signa	ture			Date Signed	

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

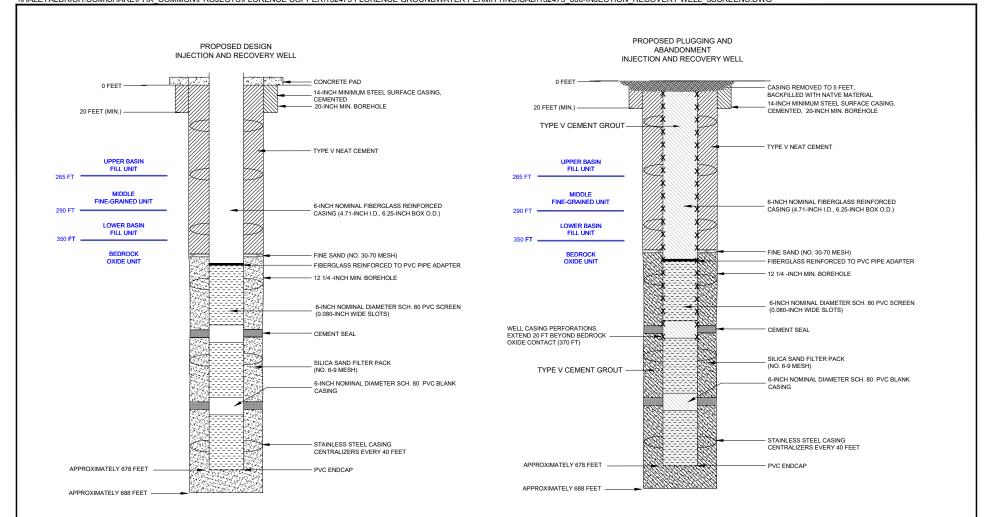
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 39 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-14

# TABLE E-14 WELLS WITHIN RESOURCE BLOCK 39

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
142	849674	746556	39	350	390	678
143	849745	746626	39	350	390	678
145	849745	746697	39	350	390	678
146	849674	746626	39	350	390	678
147	849604	746556	39	350	390	678
148	849462	746556	39	350	390	678
149	849533	746626	39	350	390	678
150	849604	746697	39	350	390	678
151	849674	746768	39	350	390	678
155	849674	746697	39	350	390	678
156	849604	746626	39	350	390	678
157	849533	746556	39	350	390	678
158	849392	746626	39	350	390	678
159	849462	746697	39	350	390	678
160	849533	746768	39	350	390	678
161	849604	746838	39	350	390	678
165	849604	746768	39	350	390	678
166	849533	746697	39	350	390	678
167	849462	746626	39	350	390	678
168	849392	746556	39	350	390	678
169	849321	746697	39	350	390	678
170	849392	746768	39	350	390	678
171	849462	746838	39	350	390	678
172	849533	746909	39	350	390	678
176	849533	746838	39	350	390	678
177	849462	746768	39	350	390	678
178	849392	746697	39	350	390	678
179	849321	746626	39	350	390	678
182	849462	746909	39	350	390	678
183	849392	746838	39	350	390	678
184	849321	746768	39	350	390	678
185	849250	746697	39	350	390	678
186	849334	746556	39	350	390	678
188	849250	746556	39	350	390	678
189	849250	746626	39	350	390	678
190	849179	746626	39	350	390	678
195	849745	746556	39	350	390	678
196	849816	746626	39	350	390	678
199	849533	746343	39	350	390	678



# TABLE E-14 WELLS WITHIN RESOURCE BLOCK 39

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
200	849604	746405	39	350	390	678
201	849604	746485	39	350	390	678
202	849533	746405	39	350	390	678
203	849462	746343	39	350	390	678
207	849462	746405	39	350	390	678
208	849533	746485	39	350	390	678
209	849462	746485	39	350	390	678
210	849392	746414	39	350	390	678
212	849392	746485	39	350	390	678
213	849321	746485	39	350	390	678
216	849321	746446	39	350	390	678
218	849674	746485	39	350	390	678

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132								
Permit or EPA ID Nu	umber	API Number		Full Well Name	·			
R9UIC-AZ3-FY1				Block 40 Wells - See A	ttached Table E-15			
State			County	Broth to Wells South	Tueste E 10			
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	Illing unit Latitude 33	.051341				
Surface Location			Longitudo	11.426662				
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.426663				
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	✓ Notice Prior to Work			Well Rewo	rk			
Class II	Date Expected to Comme	nce January 2027		Diversing a	nd Abandanmant			
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work			Conversion	n to a Non-Injection Well			
	Date Work Ended							
This plugging an use injection/ recovery wells will used as perimeter recovery wells, but wells, but wells, but wells, but wells.	description of the work planned and abandonment applies to ery wells, 1 dedicated Class III be of uniform design, and will be and observation wells prior to well will not have a segmented well screen includes plugging and abandonment in Attachment E of the application	wells Class III wells observation, and 3 Clae used for injection and field build-out. The dedicaten.	to be constructed in blo ss III perimeter wells planned recovery on an alternate basis ated perimeter observation well w resource block 40. Plugging and	ck 40 There are for construction in this bluck. Some of the injection any ill have a design and depth so dabandonment will be accom	38 Class III multi- ock. The injection and d recovery wells will be imilar to the injection and plished following			
attachments a information is	the penalty of law that I have p and that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the			
Name and Official T	itle (Please type or print)	Signature	• • • • • • • • • • • • • • • • • • •		Date Signed			
	,				_			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

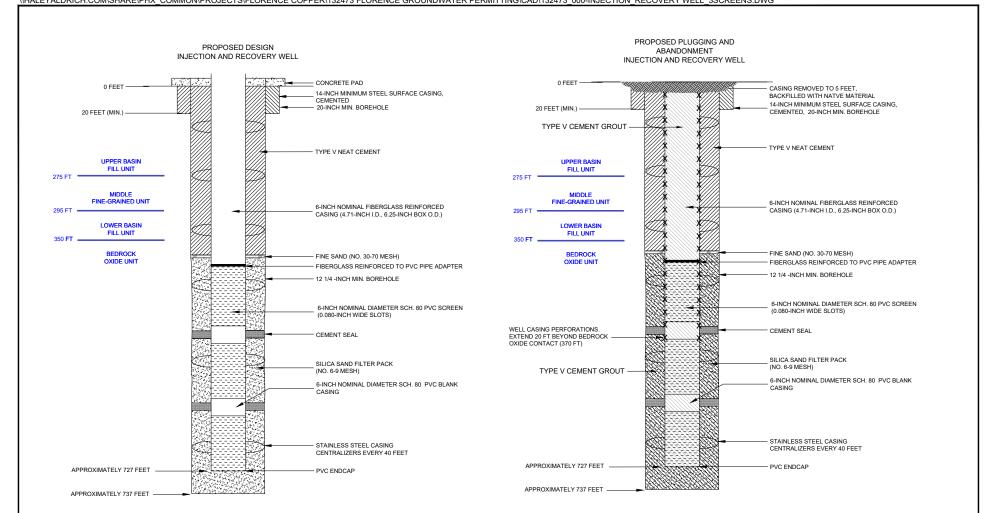
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 40 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-15a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 295 FT LOWER BASIN LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 350 FT BEDROCK OXIDE UNIT BEDROCK - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (370 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 727 FEET APPROXIMATELY 727 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 737 FEET APPROXIMATELY 737 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC
RESOURCE BLOCK 40
OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-15b

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-15 WELLS WITHIN RESOURCE BLOCK 40

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
221	849887	746626	40	350	390	727
245	850099	746556	40	350	390	727
246	850169	746626	40	350	390	727
325	850452	746697	40	350	390	727
324	850523	746626	40	350	390	727
247	850240	746697	40	350	390	727
248	850099	746626	40	350	390	727
249	850028	746556	40	350	390	727
250	849957	746626	40	350	390	727
251	850099	746697	40	350	390	727
252	850028	746626	40	350	390	727
253	849957	746556	40	350	390	727
254	849957	746697	40	350	390	727
255	850240	746556	40	350	390	727
256	850169	746556	40	350	390	727
257	850240	746626	40	350	390	727
259	850452	746626	40	350	390	727
260	850382	746697	40	350	390	727
261	850452	746556	40	350	390	727
262	850311	746556	40	350	390	727
263	850381	746556	40	350	390	727
264	850382	746626	40	350	390	727
265	850311	746626	40	350	390	727
268	850169	746343	40	350	390	727
272	850099	746414	40	350	390	727
275	850028	746485	40	350	390	727
278	850240	746485	40	350	390	727
279	850169	746485	40	350	390	727
280	850099	746485	40	350	390	727
281	850240	746414	40	350	390	727
282	850169	746414	40	350	390	727
283	850240	746343	40	350	390	727
290	850381	746485	40	350	390	727
291	850311	746485	40	350	390	727
294	850311	746414	40	350	390	727



# TABLE E-15 WELLS WITHIN RESOURCE BLOCK 40

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
304	850028	746697	40	350	390	727
305	850169	746697	40	350	390	727
306	850311	746697	40	350	390	727
012	850240	746838	40	350	390	727
P21	850028	746768	40	350	390	727
P22	850169	746768	40	350	390	727
P23	850311	746768	40	350	390	727

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	7,						
Permit or EPA ID Nu	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1	1-1			Block 44 Wells - See A	Attached Table E-16		
State			County				
Arizona			Pinal				
Locate well in two o	directions from nearest lines of	quarter section and	d drilling unit Latitude 33	5.050516			
Surface Location							
NW 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.436522			
ft. froi	m (N/S) Line of quart	er section	- 12	See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	January 2027			rk nd Abandonment n to a Non-Injection Well		
This plugging ar multi-use injection/ injection and recove wells will be used a injection and recove.  The work performed	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 44. There are 31 Class III multi-use injection/ recovery wells, 3 dedicated Class III observation, and 5 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 44. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-16a						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signa	nture		Date Signed		

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

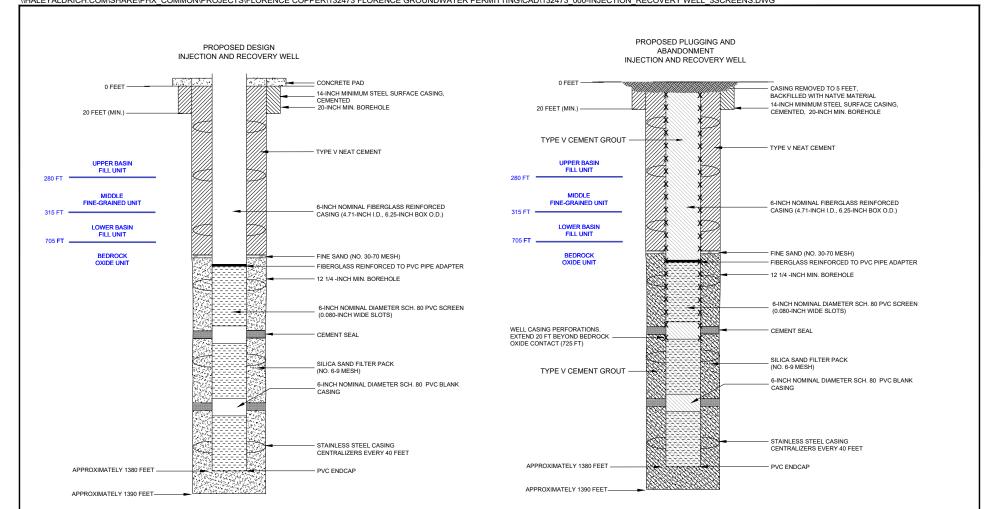
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 44 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-16a

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET 14-INCH MIN. STEEL SURFACE CASING, CASING REMOVED TO 5 FEET, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 315 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT 705 FT -705 FT - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (725 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1380 FEET APPROXIMATELY 1380 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 1390 FEET APPROXIMATELY 1390 FEET

### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FLORENCE COPPER, INC.
FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC
RESOURCE BLOCK 44
OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-16b

# TABLE E-16 WELLS WITHIN RESOURCE BLOCK 44

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
472	847129	746060	44	705	745	1380
473	847200	746131	44	705	745	1380
474	847270	746202	44	705	745	1380
475	847270	746273	44	705	745	1380
476	847200	746202	44	705	745	1380
477	847129	746131	44	705	745	1380
479	847058	745990	44	705	745	1380
480	846988	745990	44	705	745	1380
478	847058	746060	44	705	745	1380
519	847341	746273	44	705	745	1380
747	847058	746555	44	705	745	1380
750	847058	746131	44	705	745	1380
751	847129	746202	44	705	745	1380
752	847200	746273	44	705	745	1380
753	847270	746343	44	705	745	1380
757	847200	746343	44	705	745	1380
758	847129	746273	44	705	745	1380
759	847058	746202	44	705	745	1380
760	846988	746131	44	705	745	1380
761	847058	746273	44	705	745	1380
762	847129	746343	44	705	745	1380
763	847200	746414	44	705	745	1380
766	847129	746414	44	705	745	1380
767	847058	746343	44	705	745	1380
768	846988	746273	44	705	745	1380
769	847129	746485	44	705	745	1380
770	847058	746485	44	705	745	1380
771	847058	746414	44	705	745	1380
895	846988	746202	44	705	745	1380
898	846988	746060	44	705	745	1380
902	846988	746343	44	705	745	1380
040	846846	746060	44	705	745	1380
041	846846	746343	44	705	745	1380
042	846917	746626	44	705	745	1380
P78	846917	745990	44	705	745	1380
P79	846917	746131	44	705	745	1380
P80	846917	746273	44	705	745	1380
P81	846988	746414	44	705	745	1380
P82	846988	746555	44	705	745	1380

Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,							
		T		T				
Permit or EPA ID No		API Number		Full Well Name				
R9UIC-AZ3-FY1	1-1			Block 45 Wells - See A	Attached Table E-17			
State			County					
Arizona			Pinal					
Locate well in two	Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.050597							
Surface Location			Longitude _1	11.434617				
NE 1/4 of SV	w 1/4 of Section 28		Range 9E	See Attached Table for Individual Well Coordinates.				
ft. fro	m (E/W) Line of quart	er section.						
Well Class	Timing of Action (pick one)			Type of Action	(nick one)			
					,			
Class I	Date Expected to Comme	ence January 2027		Well Rewor	rk			
Class II		variatify 2027		✓ Plugging a	nd Abandonment			
✓ Class III	Report After Work			Conversion	n to a Non-Injection Well			
Class V	Date Work Ended			Conversion	to a Non-injection Wen			
planned for const on an alternate b	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 45. There are 50 Class III multi-use injection/ recovery wells, planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out.  The work performed includes plugging and abandonment of the Class III wells in resource block 45. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figure E-17.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signati	ure		Date Signed			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

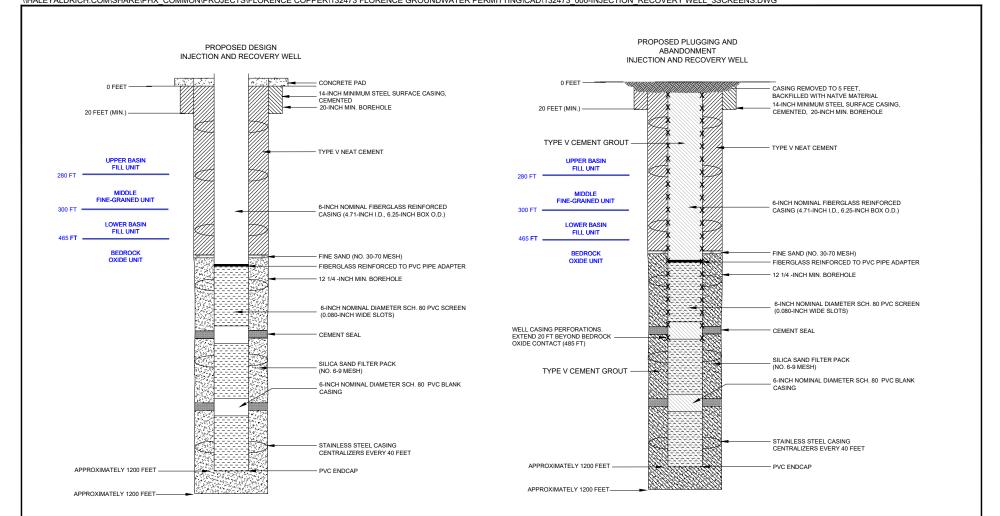
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





ABANDONMENT SCHEMATIC RESOURCE BLOCK 45 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FLORENCE COPPER, INC.

FIGURE E-17

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-17 WELLS WITHIN RESOURCE BLOCK 45 FLORENCE COPPER PROJECT

FLORENCE, ARIZONA

				Depth to Top of	Depth to Top of	Depth to Bottom of
Well	Easting	Northing	Resource	Bedrock	Injection Zone	Injection Zone
Number			Block	(ft bgs)	(ft bgs)	(ft bgs)
420 (PTF)	847624	746061	45	465	505	1200
421	847977	746202	45	465	505	1200
422	847907	746131	45	465	505	1200
423 (PTF)	847836	746061	45	465	505	1200
424	847765	745990	45	465	505	1200
425	847977	746273	45	465	505	1200
426	847907	746202	45	465	505	1200
427 (PTF)	847836	746131	45	465	505	1200
428 (PTF)	847765	746061	45	465	505	1200
429 (PTF)	847695	745990	45	465	505	1200
467	848048	746273	45	465	505	1200
481 (PTF)	847553	746131	45	465	505	1200
484	847483	746202	45	465	505	1200
485	847412	746273	45	465	505	1200
526 (PTF)	847553	746202	45	465	505	1200
527	847483	746273	45	465	505	1200
528	847553	746273	45	465	505	1200
529	847483	746343	45	465	505	1200
530	847553	746414	45	465	505	1200
531	847553	746343	45	465	505	1200
532 (PTF)	847624	746202	45	465	505	1200
533 (PTF)	847624	746131	45	465	505	1200
534 (PTF)	847625	746272	45	465	505	1200
535	847624	746343	45	465	505	1200
536	847624	746485	45	465	505	1200
537	847624	746414	45	465	505	1200
539	847765	746555	45	465	505	1200
541	847695	746555	45	465	505	1200
542 (PTF)	847695	746061	45	465	505	1200
543 (PTF)	847765	746131	45	465	505	1200
544 (PTF)	847836	746202	45	465	505	1200
545	847907	746273	45	465	505	1200
546 (PTF)	847695	746202	45	465	505	1200
547 (PTF)	847765	746273	45	465	505	1200
548	847836	746343	45	465	505	1200
549	847907	746343	45	465	505	1200
550	847836	746273	45	465	505	1200
551 (PTF)	847765	746202	45	465	505	1200
552 (PTF)	847695	746131	45	465	505	1200



## TABLE E-17 WELLS WITHIN RESOURCE BLOCK 45

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
553	847695	746343	45	465	505	1200
554	847765	746414	45	465	505	1200
555	847836	746414	45	465	505	1200
556	847765	746343	45	465	505	1200
557 (PTF)	847695	746273	45	465	505	1200
558	847765	746485	45	465	505	1200
559	847695	746414	45	465	505	1200
560	847695	746485	45	465	505	1200
562	847836	746485	45	465	505	1200
564	847907	746414	45	465	505	1200
565	847977	746343	45	465	505	1200

#### Notes:

ft bgs = feet below ground surface
(PTF) Denotes existing PTF ISCR well



**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee						
Florence Copper F 1575 W Hunt Hw Florence, AZ 8513	roject					
Permit or EPA ID No		ADI Numbar		FII Mall Nama		
		API Number		Full Well Name	· 1 170 11 T 10	
R9UIC-AZ3-FY1	1-1			Block 46 Wells - See A	Attached Table E-18	
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	5.050571		
Surface Location			l amaltuda d	11 122200		
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.432280		
			7.2	See Attached Table		
ft. fro	m (N/S) Line of quarto	er section		for Individual Well		
				Coordinates.		
It. IIO	m (E/W) Line of quart	er section.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)	
Class I	<b>✓</b> Notice Prior to Work			Well Rewo	rk	
Class II	Date Expected to Comme	nce January 2027				
✓ Class III				✓ Plugging a	nd Abandonment	
H	Report After Work			Conversion	n to a Non-Injection Well	
Class V	Date Work Ended				, , , , , , , , , , , , , , , , , , ,	
planned for cons on an alternate b	truction in this block. The inject asis. Some of the injection and includes plugging and abandonments.	on and recovery w d recovery wells will ent of the Class III wel	icted in block 46. There are 49 Classells will be of uniform design, and be used as perimeter and observations in resource block 46. Plugging an AZ3-FY11-1. Plugging and abandor	d will be used for injection wells prior to well field built abandonment will be accomed.	n and recovery d-out. nplished following	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signa	ture		Date Signed	

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

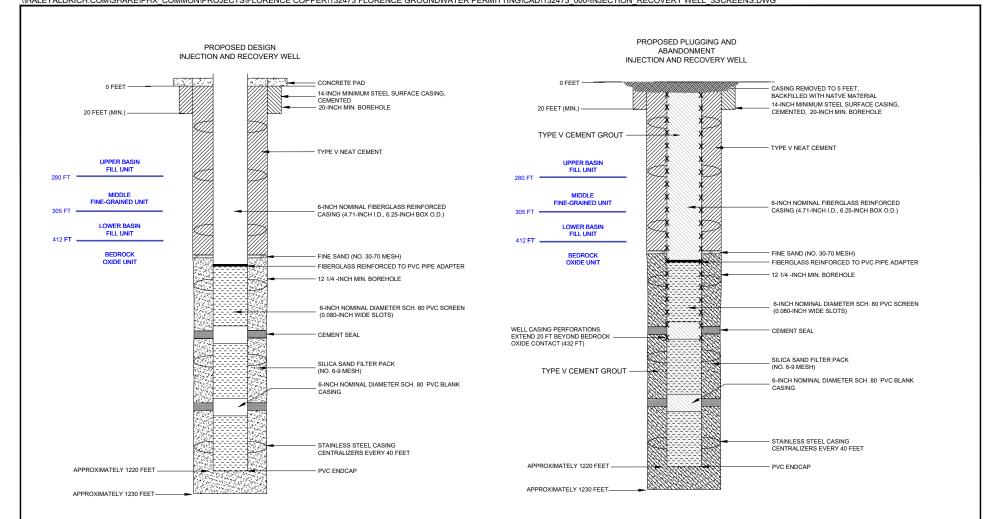
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 46 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-18

# TABLE E-18 WELLS WITHIN RESOURCE BLOCK 46

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock	Depth to Top of Injection Zone	Depth to Bottom of Injection Zone
Number			BIOCK	(ft bgs)	(ft bgs)	(ft bgs)
344	848402	746528	46	412	452	1220
345	848685	746202	46	412	452	1220
346	848614	746131	46	412	452	1220
347	848543	746061	46	412	452	1220
348	848472	746131	46	412	452	1220
349	848543	746202	46	412	452	1220
350	848614	746273	46	412	452	1220
351	848685	746273	46	412	452	1220
352	848614	746202	46	412	452	1220
353	848543	746131	46	412	452	1220
354	848331	746131	46	412	452	1220
355	848402	746202	46	412	452	1220
356	848472	746273	46	412	452	1220
357	848543	746343	46	412	452	1220
358	848614	746343	46	412	452	1220
359	848543	746273	46	412	452	1220
360	848472	746202	46	412	452	1220
361	848402	746131	46	412	452	1220
362	848331	746061	46	412	452	1220
363	848260	746202	46	412	452	1220
364	848331	746273	46	412	452	1220
365	848402	746343	46	412	452	1220
366	848472	746414	46	412	452	1220
367	848543	746414	46	412	452	1220
368	848472	746343	46	412	452	1220
369	848402	746273	46	412	452	1220
370	848331	746202	46	412	452	1220
371	848260	746131	46	412	452	1220
372	848472	746485	46	412	452	1220
373	848402	746414	46	412	452	1220
374	848331	746343	46	412	452	1220
375	848260	746273	46	412	452	1220
376	848190	746202	46	412	452	1220
377	848190	746273	46	412	452	1220
378	848260	746343	46	412	452	1220
379	848331	746414	46	412	452	1220
380	848402	746485	46	412	452	1220
381	848331	746485	46	412	452	1220
382	848260	746414	46	412	452	1220



# TABLE E-18 WELLS WITHIN RESOURCE BLOCK 46

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
383	848190	746343	46	412	452	1220
384	848119	746273	46	412	452	1220
386	848543	746485	46	412	452	1220
388	848614	746414	46	412	452	1220
389	848685	746343	46	412	452	1220
390	848756	746272	46	412	452	1220
414	848402	746061	46	412	452	1220
415	848471	746061	46	412	452	1220
416	848402	745990	46	412	452	1220
417	848472	745990	46	412	452	1220

### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address I	Phone Number and/or Email of P	ormittoe			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitee			
Permit or EPA ID Nu	ımher	API Number		Full Well Name	
R9UIC-AZ3-FY1		Ari Nullibei		Block 47 Wells - See A	ttacked Takle E 10
	1-1			Block 4/ Wells - See A	Attached Table E-19
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and t	Latitude 33	3.050530	
Surface Location			Lamaticala d	11 100071	
NW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.429954	
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application	ion and recovery well d recovery wells will be ent of the Class III wells	s will be of uniform design, an e used as perimeter and observati in resource block 47. Plugging an	d will be used for injection wells prior to well field built abandonment will be accomed abandonment will be accomed.	n and recovery d-out. aplished following
			4161 41 .		
attachments a information is	the penalty of law that I have p ind that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals im I am aware that there	mediately responsible for obtai	ining the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatu	ire		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

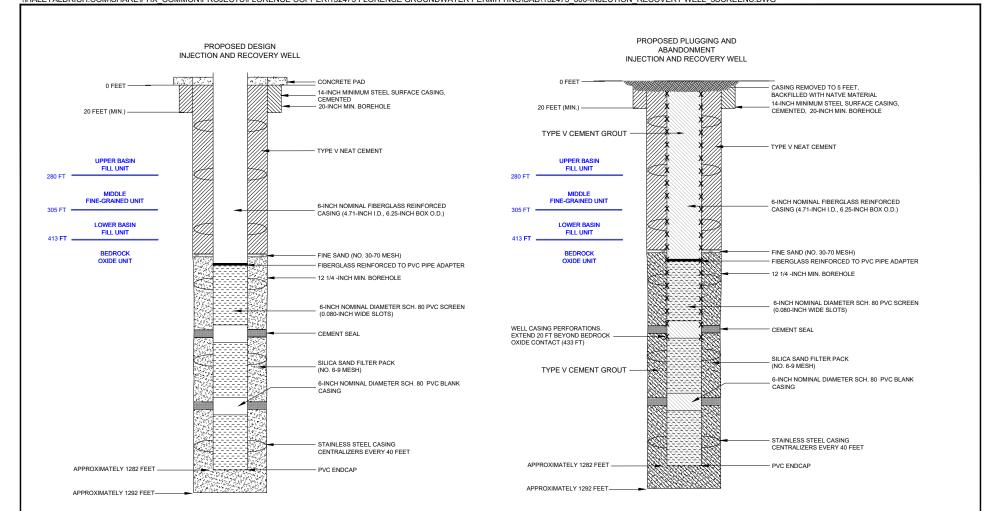
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 47 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-19

# TABLE E-19 WELLS WITHIN RESOURCE BLOCK 47

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
92	849038	746061	47	413	453	1282
93	849109	746131	47	413	453	1282
94	849109	746202	47	413	453	1282
95	849038	746131	47	413	453	1282
96	848967	746202	47	413	453	1282
97	849038	746273	47	413	453	1282
98	849109	746273	47	413	453	1282
99	849038	746194	47	413	453	1282
100	848967	746131	47	413	453	1282
101	848897	746273	47	413	453	1282
102	848967	746343	47	413	453	1282
103	849038	746343	47	413	453	1282
104	848967	746273	47	413	453	1282
105	848897	746202	47	413	453	1282
106	848967	746414	47	413	453	1282
107	848897	746343	47	413	453	1282
108	848816	746273	47	413	453	1282
109	849109	746485	47	413	453	1282
110	849038	746485	47	413	453	1282
111	849109	746414	47	413	453	1282
112	849038	746414	47	413	453	1282
113	849109	746343	47	413	453	1282
114	849109	746007	47	413	453	1282
115	849109	746061	47	413	453	1282
116	849321	746131	47	413	453	1282
117	849250	746131	47	413	453	1282
118	849250	746202	47	413	453	1282
119	849321	746273	47	413	453	1282
120	849250	746273	47	413	453	1282
121	849179	746202	47	413	453	1282
122	849179	746031	47	413	453	1282
123	849250	746061	47	413	453	1282
124	849179	746061	47	413	453	1282
125	849179	746131	47	413	453	1282
126	849180	746272	47	413	453	1282
127	849250	746343	47	413	453	1282
128	849179	746343	47	413	453	1282
129	849179	746414	47	413	453	1282
141	849109	746555	47	413	453	1282



# TABLE E-19 WELLS WITHIN RESOURCE BLOCK 47

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
187	849179	746556	47	413	453	1282
197	849382	746202	47	413	453	1282
198	849462	746273	47	413	453	1282
204	849392	746273	47	413	453	1282
205	849321	746202	47	413	453	1282
206	849392	746343	47	413	453	1282
211	849321	746343	47	413	453	1282
214	849250	746485	47	413	453	1282
215	849179	746485	47	413	453	1282
217	849250	746414	47	413	453	1282

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	<i>'</i> ,							
		ı				Г		
Permit or EPA ID Nu		API Number	•				/ell Name	. 1 17 11 7 20
R9UIC-AZ3-FY1	l-l					Block	48 Wells - See A	ttached Table E-20
State				County				
Arizona				Pinal				
Locate well in two o	lirections from nearest lines o	quarter section	on and dri	illing unit	Latitude 33	.050486	5	
Surface Location					Longitude _1	11.4276	59	
NW 1/4 of SE	1/4 of Section 28	Township 4S	Ra	nge 9E				
	m (N/S) Line of quart						tached Table vidual Well nates.	
Well Class	Timing of Action (pick one)						Type of Action (	pick one)
Class I	✓ Notice Prior to Work						Well Rework	k
Class II	Date Expected to Comme	ence January	2027					
✓ Class III							✓ Plugging an	d Abandonment
Class V	Report After Work			_			Conversion	to a Non-Injection Well
	Date Work Ended							
This plugging and al planned for const on an alternate b	candonment applies to wells Class ruction in this block. The injectasis. Some of the injection are includes plugging and abandonm in Attachment E of the application	s III wells to be o tion and recov d recovery wells ent of the Class	constructed ery wells v s will be u	in block 48. The will be of unifoused as periment resource block	nere are 45 Class orm design, an ter and observati 48. Plugging an	s III multi d will be on wells	use injection/ recove used for injection prior to well field build	very wells,  and recovery  l-out.  blished following
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)		Signature	<u></u>				Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

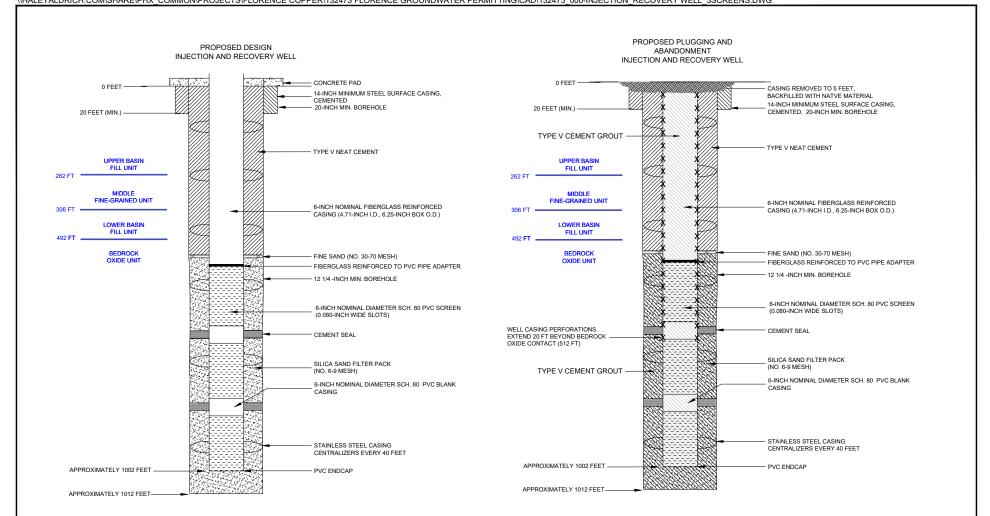
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





**NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 48 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-20

## TABLE E-20 WELLS WITHIN RESOURCE BLOCK 48

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
219	849816	746556	48	492	532	1002
220	849887	746556	48	492	532	1002
222	849745	746273	48	492	532	1002
223	849816	746273	48	492	532	1002
224	849745	746226	48	492	532	1002
226	849604	746273	48	492	532	1002
227	849674	746343	48	492	532	1002
228	849745	746343	48	492	532	1002
229	849674	746273	48	492	532	1002
230	849604	746202	48	492	532	1002
232	849674	746414	48	492	532	1002
233	849604	746343	48	492	532	1002
234	849533	746273	48	492	532	1002
237	849816	746485	48	492	532	1002
238	849745	746485	48	492	532	1002
239	849816	746414	48	492	532	1002
240	849745	746414	48	492	532	1002
241	849816	746343	48	492	532	1002
242	849887	746343	48	492	532	1002
243	849887	746485	48	492	532	1002
244	849887	746414	48	492	532	1002
267	850099	746343	48	492	532	1002
269	850099	746273	48	492	532	1002
270	849957	746343	48	492	532	1002
271	850028	746414	48	492	532	1002
273	850028	746343	48	492	532	1002
274	849957	746273	48	492	532	1002
276	849957	746414	48	492	532	1002
277	849957	746485	48	492	532	1002
775	849816	745990	48	492	532	1002
776	849887	745990	48	492	532	1002
777	849887	746061	48	492	532	1002
780	849957	746061	48	492	532	1002
781	850028	746131	48	492	532	1002
783	850028	746171	48	492	532	1002
784	849957	746131	48	492	532	1002
933	849745	746061	48	492	532	1002
934	849816	746131	48	492	532	1002
935	849816	746162	48	492	532	1002



# TABLE E-20 WELLS WITHIN RESOURCE BLOCK 48

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
936	849745	746131	48	492	532	1002
941	849674	746107	48	492	532	1002
950	849816	746061	48	492	532	1002
951	849887	746181	48	492	532	1002
952	849887	746131	48	492	532	1002
966	849957	746171	48	492	532	1002

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper Proj 1575 W Hunt Hwy, Florence, AZ 85132	ject						
Permit or EPA ID Numl	ber	API Number		Full Well Name	·		
R9UIC-AZ3-FY11-1		111111111111111111111111111111111111111		Block 49 Wells - See A	ttached Table E-21		
State			County	Breeze to the Breeze			
Arizona			Pinal				
Locate well in two dire	ections from nearest lines of	quarter section and dr	illing unit Latitude 33	.050537			
Surface Location							
NE 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -1	11.425633			
ft. from (				See Attached Table for Individual Well Coordinates.			
Well Class Ti	ming of Action (pick one)			Type of Action	(pick one)		
Class I	Notice Prior to Work			Well Rewo	rk		
Class II	Date Expected to Comme	nce January 2027					
✓ Class III				✓ Plugging a	nd Abandonment		
Class V	Report After Work		_	Conversion	n to a Non-Injection Well		
	Date Work Ended						
This plugging and Class III multi-use inje block. The injection and recovery and depth similar to the The work performed inc	l abandonment applies ection/ recovery wells, 2 do and recovery wells will be of wells will be used as perime injection and recovery wells, becludes plugging and abandonment.	to wells Class III edicated Class III obs f uniform design, and eter and observation wells ut will not have a segmen	wells to be constructed ervation, and 5 Class III power will be used for injection and prior to well field build-out. The otted well screen.  I resource block 49. Plugging and i-FY11-1. Plugging and abandon	ed in block 49.  perimeter wells planned for a leternate dedicated perimeter observation de abandonment will be accom	There are 19 or construction in this basis. Some of the on well will have a design		
attachments and information is tru	that, based on my inquiry o	ersonally examined and f those individuals imm I am aware that there a	cification d am familiar with the informat ediately responsible for obtai re significant penalties for sul	ning the information, I beli	eve that the		
		T					
Name and Official Title	(Please type or print)	Signatur	9		Date Signed		
Name and Official Title	(Please type or print)	Signatur	9		Date Signed		

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

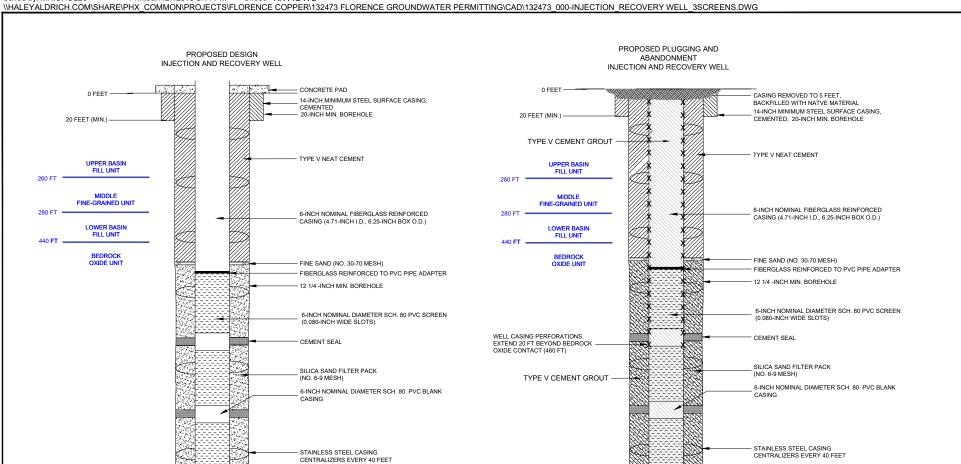
For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.

PVC ENDCAP



APPROXIMATELY 853 FEET

APPROXIMATELY 863 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 49 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-21a

#### NOTES

APPROXIMATELY 853 FEET

APPROXIMATELY 863 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) -CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT LOWER BASIN LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 440 FT BEDROCK - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (460 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 853FEET APPROXIMATELY 853 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 863 FEET APPROXIMATELY 863 FEET FLORENCE COPPER, INC. FLORENCE, ARIZONA

#### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

ABANDONMENT SCHEMATIC RESOURCE BLOCK 49 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-21b

# TABLE E-21 WELLS WITHIN RESOURCE BLOCK 49

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
258	850523	746556	49	440	480	853
266	850240	746273	49	440	480	853
284	850523	746414	49	440	480	853
285	850452	746343	49	440	480	853
286	850381	746273	49	440	480	853
287	850381	746343	49	440	480	853
288	850311	746343	49	440	480	853
289	850452	746485	49	440	480	853
292	850452	746414	49	440	480	853
293	850381	746414	49	440	480	853
321	850452	746273	49	440	480	853
322	850523	746343	49	440	480	853
323	850523	746273	49	440	480	853
801	850523	746061	49	440	480	853
805	850523	745990	49	440	480	853
806	850452	746098	49	440	480	853
807	850523	746106	49	440	480	853
808	850452	746061	49	440	480	853
809	850381	746131	49	440	480	853
015	850664	746344	49	440	480	853
016	850664	745990	49	440	480	853
P27	850594	746556	49	440	480	853
P28	850594	746414	49	440	480	853
P29	850594	746273	49	440	480	853
P30	850594	746106	49	440	480	853
P31	850594	745919	49	440	480	853

#### Notes:

ft bgs = feet below ground surface

**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address I	Phone Number and/or Email of P	ormittoe			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitee			
Permit or EPA ID Nu	ımher	API Number		Full Well Name	
R9UIC-AZ3-FY1		AFINUMBER		Block 52 Wells - See A	ttacked Table E 22
	1-1			Block 32 Wells - See A	ttached Table E-22
State			County		
Arizona	dia		Pinal		
Locate well in two	directions from nearest lines of	quarter section and t	Irilling unit Latitude 33	.049763	
Surface Location			Lammituda 1	11 425705	
NW 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.435705	
	m (N/S) Line of quarte			See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well
planned for const of the injection and The work performed	bandonment applies to wells Class truction in this block. The inject recovery wells will be used as p I includes plugging and abandonme in Attachment E of the application	ion and recovery well erimeter and observation ent of the Class III wells	will be used for injection and n wells prior to well field build-out. in resource block 52. Plugging ar	recovery on an alternate	basis. Some
			4.61		
attachments a information is	the penalty of law that I have p ind that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals im I am aware that there	mediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

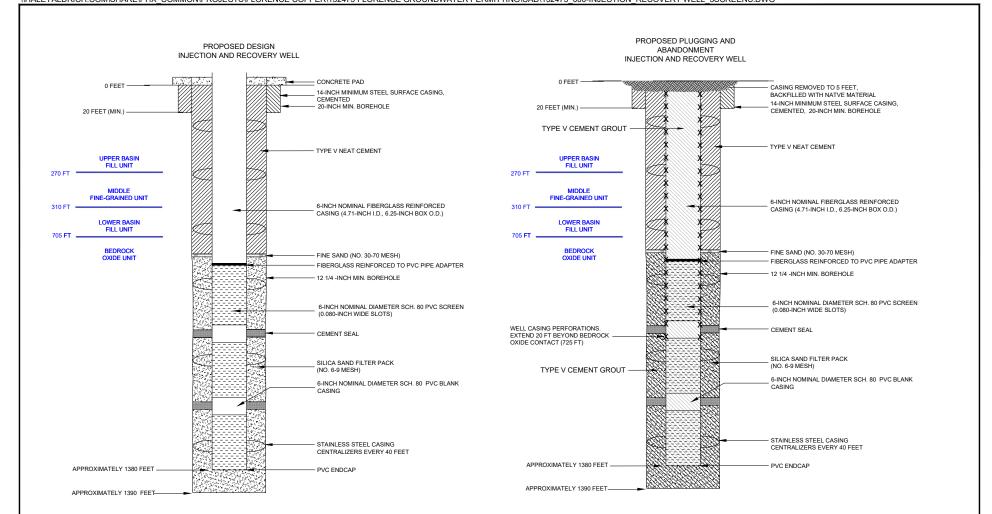
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 52 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-22

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

## TABLE E-22 WELLS WITHIN RESOURCE BLOCK 52

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
907	846988	745919	52	705	745	1380

#### Notes:

ft bgs = feet below ground surface



OMB No. 2040-0042

Approval Expires 4/30/2022

**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address I	Phone Number and/or Email of P	ormittee	AND ADANDONNE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	ermittee			
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1		Arrivallibei		Block 53 Wells - See A	ttoched Toble E 23
	1-1			Block 33 Wells - See A	tttaclied Table E-23
State Arizona			Pinal		
Surface Location  NW 1/4 of SV  ft. from	1/4 of Section 28  m (N/S) Line of quarter (E/W) Line of quarter	Township 4S R	Latitude 33	.049763  11.435705  See Attached Table for Individual Well Coordinates.	
Class I Class II Class III Class V	Timing of Action (pick one)  Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	January 2027			
perimeter well plant recovery on an a dedicated perimeter The work performed	bandonment applies to wells Class led for construction in this in Iternate basis. Some of the in well will have a design and depth in includes plugging and abandonme in Attachment E of the application	block. The injection an njection and recovery we similar to the injection an ent of the Class III wells i	d recovery wells will be of un ells will be used as perimeter id recovery wells, but will not have in resource block 53. Plugging an	iform design, and will be and observation wells prior to a segmented well screen. d abandonment will be accom	used for injection and well field build-out. The plished following
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4)	ersonally examined an f those individuals imn I am aware that there a	nediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

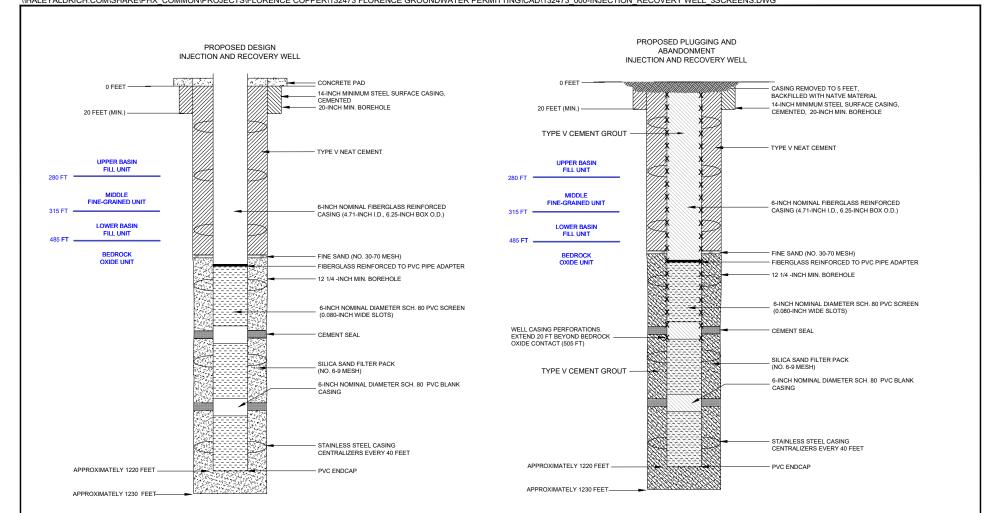
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 53 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-23

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

### TABLE E-23 WELLS WITHIN RESOURCE BLOCK 53

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

				Depth to Top of	Depth to Top of	Depth to Bottom of
Well	Easting	Northing	Resource	Bedrock	Injection Zone	Injection Zone
Number	Lusting	i i i i i i i i i i i i i i i i i i i	Block	(ft bgs)	(ft bgs)	(ft bgs)
419 (PTF)	847624	745990	53	485	525	1220
430	847695	745919	53	485	525	1220
431	847553	745990	53	485	525	1220
432	847624	745919	53	485	525	1220
482	847483	746131	53	485	525	1220
483	847412	746202	53	485	525	1220
486 (PTF)	847553	746061	53	485	525	1220
487	847412	745990	53	485	525	1220
488	847482	746061	53	485	525	1220
489	847412	746061	53	485	525	1220
490	847341	745990	53	485	525	1220
491	847200	745990	53	485	525	1220
492	847270	746060	53	485	525	1220
493	847341	746131	53	485	525	1220
494	847412	746131	53	485	525	1220
495	847341	746060	53	485	525	1220
496	847270	745990	53	485	525	1220
497	847341	746202	53	485	525	1220
498	847270	746131	53	485	525	1220
499	847200	746060	53	485	525	1220
500	847129	745990	53	485	525	1220
501	847482	745990	53	485	525	1220
502	847412	745848	53	485	525	1220
503	847341	745919	53	485	525	1220
504	847270	745848	53	485	525	1220
505	847270	745919	53	485	525	1220
506	847200	745919	53	485	525	1220
508	847129	745919	53	485	525	1220
509	847058	745919	53	485	525	1220
510	847553	745919	53	485	525	1220
511	847482	745919	53	485	525	1220
512	847412	745919	53	485	525	1220
2095	847481	745776	53	485	525	1220
2096	847552	745847	53	485	525	1220
2097	847552	745776	53	485	525	1220
2098	847623	745847	53	485	525	1220
2204	847411	745635	53	485	525	1220
2205	847481	745705	53	485	525	1220
2206	847411	745705	53	485	525	1220



## TABLE E-23 WELLS WITHIN RESOURCE BLOCK 53

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2267	847340	745705	53	485	525	1220
2268	847366	745660	53	485	525	1220
2269	847340	745776	53	485	525	1220
2270	847269	745721	53	485	525	1220
2271	847199	745776	53	485	525	1220
2354	847412	745776	53	485	525	1220
2355	847269	745776	53	485	525	1220
2356	847340	745847	53	485	525	1220
2358	847199	745847	53	485	525	1220
2361	847481	745847	53	485	525	1220
P76	847129	745848	53	485	525	1220

#### Notes:

ft bgs = feet below ground surface

(PTF) Denotes existing PTF ISCR well



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address F	Phone Number and/or Email of P	ermittee					
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitee					
Permit or EPA ID Nu	ımher	API Number		Full Well Name			
R9UIC-AZ3-FY1		AFINUMBER		Block 54 Wells - See A	ttacked Table E 24		
	1-1			Block 34 Wells - See A	mached Table E-24		
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and t	Irilling unit Latitude 33	.049920			
Surface Location			Lammituda 1	11 422 474			
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.433474			
ft. fro	m (N/S) Line of quarte			See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well		
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and I includes plugging and abandonme in Attachment E of the application	ion and recovery well d recovery wells will be ent of the Class III wells	s will be of uniform design, an e used as perimeter and observat in resource block 54. Plugging ar	d will be used for injection wells prior to well field built abandonment will be accomed abandonment will be accomed to the contract of the well abandonment will be accomed to the contract of the well abandonment will be accomed to the well about the well-abandonment will be accomed to	n and recovery d-out. nplished following		
			4161 41				
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed		

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

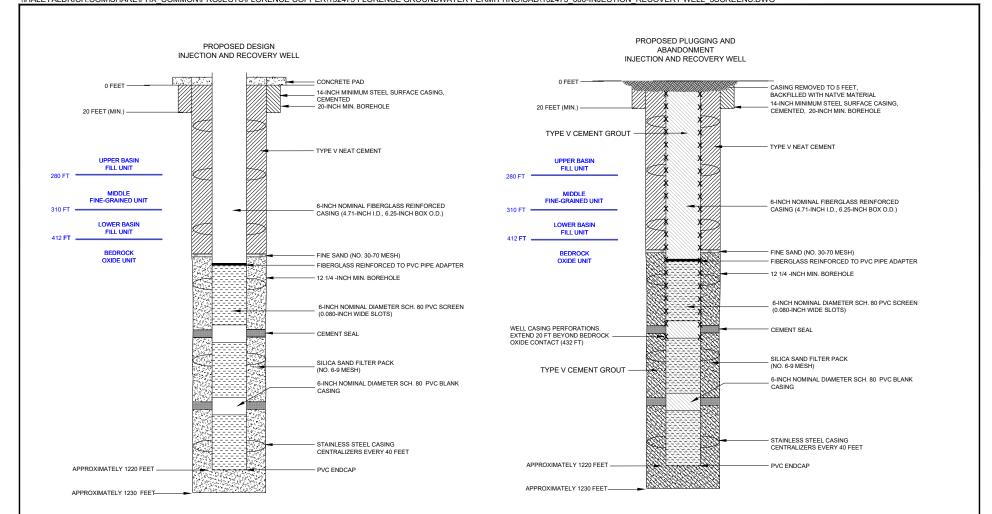
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 54 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-24

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-24 WELLS WITHIN RESOURCE BLOCK 54 FLORENCE COPPER PROJECT

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
433	847836	745990	54	412	452	1220
434	847907	746061	54	412	452	1220
435	847977	746131	54	412	452	1220
436	847977	745990	54	412	452	1220
437	847907	745990	54	412	452	1220
438	847977	746061	54	412	452	1220
439	848260	746061	54	412	452	1220
440	848260	745990	54	412	452	1220
441	848190	746131	54	412	452	1220
442	848190	746061	54	412	452	1220
443	848119	746131	54	412	452	1220
444	848190	745990	54	412	452	1220
445	848048	745990	54	412	452	1220
446	848119	745990	54	412	452	1220
447	848119	746061	54	412	452	1220
448	848048	746061	54	412	452	1220
449	848048	746131	54	412	452	1220
450	847836	745848	54	412	452	1220
451	847765	745919	54	412	452	1220
453	847977	745919	54	412	452	1220
454	847907	745919	54	412	452	1220
455	847836	745919	54	412	452	1220
456	847977	745848	54	412	452	1220
457	848260	745848	54	412	452	1220
458	848260	745919	54	412	452	1220
459	848190	745919	54	412	452	1220
460	848119	745919	54	412	452	1220
461	848048	745919	54	412	452	1220
462	848119	745848	54	412	452	1220
466	848119	746202	54	412	452	1220
468	848048	746202	54	412	452	1220
469	848402	745919	54	412	452	1220
470	848331	745990	54	412	452	1220
471	848331	745919	54	412	452	1220
2109	847976	745705	54	412	452	1220
2116	847906	745776	54	412	452	1220
2124	847906	745847	54	412	452	1220
2125	847976	745776	54	412	452	1220
2126	848118	745635	54	412	452	1220



## TABLE E-24 WELLS WITHIN RESOURCE BLOCK 54

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2127	848188	745706	54	412	452	1220
2128	848259	745776	54	412	452	1220
2129	848330	745847	54	412	452	1220
2130	848188	745776	54	412	452	1220
2131	848118	745706	54	412	452	1220
2132	848047	745635	54	412	452	1220
2134	848048	745705	54	412	452	1220
2135	848118	745776	54	412	452	1220
2136	848047	745776	54	412	452	1220
2137	848188	745847	54	412	452	1220
2138	848047	745847	54	412	452	1220

#### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address I	Phone Number and/or Email of P	ormittoe					
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitee					
Permit or EPA ID Nu	ımher	API Number		Full Well Name			
R9UIC-AZ3-FY1		Ari Nulliber		Block 55 Wells - See A	ttoohad Tahla E 25		
	1-1			Block 33 Wells - See A	Attached Table E-23		
State			County				
Arizona			Pinal				
Locate well in two t	directions from nearest lines of	quarter section and (	17 Latitude 33	5.049911			
Surface Location			l ammituuda 1	11 101071			
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.431264			
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I  Class II  ✓ Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well		
planned for const on an alternate b The work performed	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application	ion and recovery well d recovery wells will be ent of the Class III wells	Is will be of uniform design, an e used as perimeter and observat in resource block 55. Plugging ar	d will be used for injection wells prior to well field built abandonment will be accomed.	n and recovery d-out. nplished following		
			416 - 41				
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatu	ire		Date Signed		

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

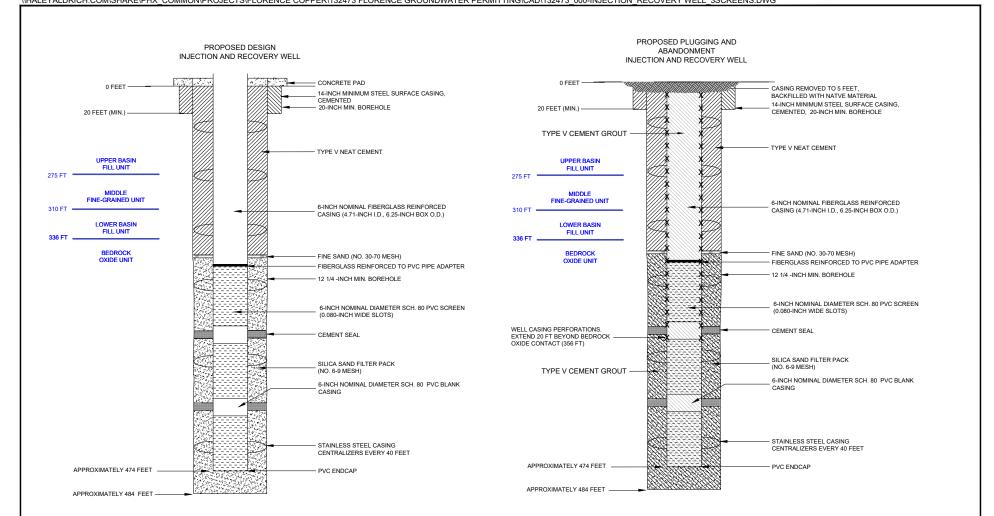
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 55 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-25

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

## TABLE E-25 WELLS WITHIN RESOURCE BLOCK 55

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
392	848543	745990	55	336	376	474
393	848614	746061	55	336	376	474
394	848685	746131	55	336	376	474
395	848684	745990	55	336	376	474
396	848614	745990	55	336	376	474
397	848685	746061	55	336	376	474
398	848755	746202	55	336	376	474
399	848755	745990	55	336	376	474
400	848755	746061	55	336	376	474
401	848755	746131	55	336	376	474
402	848614	745919	55	336	376	474
403	848755	745955	55	336	376	474
404	848967	745990	55	336	376	474
405	848967	746061	55	336	376	474
406	848897	745990	55	336	376	474
407	848826	746061	55	336	376	474
408	848897	746131	55	336	376	474
409	848897	746061	55	336	376	474
410	848826	745990	55	336	376	474
411	848826	746202	55	336	376	474
412	848826	746131	55	336	376	474
413	848897	745955	55	336	376	474
418	848472	745919	55	336	376	474
463	848543	745848	55	336	376	474
465	848543	745919	55	336	376	474
931	849038	745891	55	336	376	474
1640	848755	745636	55	336	376	474
1653	848826	745636	55	336	376	474
1654	848897	745707	55	336	376	474
1655	848967	745778	55	336	376	474
1656	848967	745848	55	336	376	474
1657	848897	745778	55	336	376	474
1658	848826	745707	55	336	376	474
1659	849038	745848	55	336	376	474
2173	848595	745847	55	336	376	474
2186	848683	745706	55	336	376	474
2191	848697	745847	55	336	376	474
2192	848683	745776	55	336	376	474
2193	848755	745705	55	336	376	474



## TABLE E-25 WELLS WITHIN RESOURCE BLOCK 55

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2194	848754	745776	55	336	376	474
2195	848754	745847	55	336	376	474
2200	848825	745776	55	336	376	474
2201	848896	745847	55	336	376	474
2202	848825	745847	55	336	376	474

#### Notes:

ft bgs = feet below ground surface



**≎EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee						
1575 W Hunt Hwy	Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1	1-1			Block 56 Wells - See A	Attached Table E-26			
State			County					
Arizona	Arizona							
Locate well in two	Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.049632							
Surface Location			Longitude _1	11 428882				
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	ange 9E					
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	✓ Notice Prior to Work			Well Rewo	,			
Class II	Date Expected to Comme	nce January 2027		Diversion of	ad Abaadaaaa			
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well			
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 56. There are 48 Class III multi-use injection/ recovery wells, planned for construction in this block. The injection and recovery wells will be used as perimeter and observation wells prior to well field build-out.  The work performed includes plugging and abandonment of the Class III wells in resource block 56. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figure E-26.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

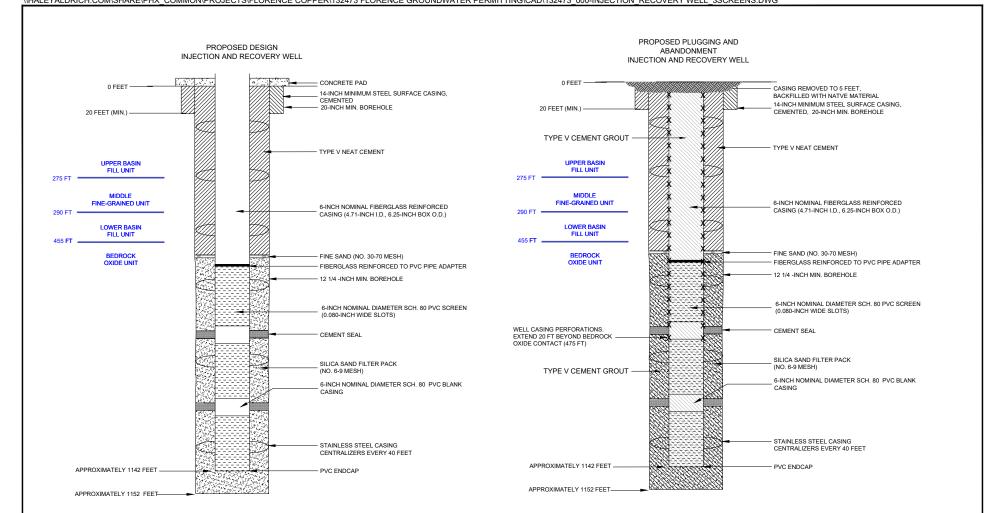
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 56 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-26

# TABLE E-26 WELLS WITHIN RESOURCE BLOCK 56

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
130	849321	746077	56	455	495	1142
225	849533	746202	56	455	495	1142
231	849533	746145	56	455	495	1142
235	849462	746202	56	455	495	1142
236	849392	746131	56	455	495	1142
778	849816	745919	56	455	495	1142
779	849745	745919	56	455	495	1142
932	849674	745990	56	455	495	1142
937	849674	746061	56	455	495	1142
938	849604	745990	56	455	495	1142
939	849462	745990	56	455	495	1142
940	849533	746061	56	455	495	1142
942	849604	746061	56	455	495	1142
943	849533	745990	56	455	495	1142
944	849392	746013	56	455	495	1142
945	849462	746034	56	455	495	1142
946	849392	745990	56	455	495	1142
947	849321	745990	56	455	495	1142
948	849250	745962	56	455	495	1142
949	849745	745990	56	455	495	1142
954	849674	745848	56	455	495	1142
955	849604	745919	56	455	495	1142
956	849533	745848	56	455	495	1142
957	849533	745919	56	455	495	1142
958	849462	745919	56	455	495	1142
959	849392	745848	56	455	495	1142
960	849392	745919	56	455	495	1142
961	849321	745919	56	455	495	1142
962	849250	745919	56	455	495	1142
963	849179	745919	56	455	495	1142
964	849250	745848	56	455	495	1142
965	849674	745919	56	455	495	1142
1480	849462	745636	56	455	495	1142
1562	849533	745636	56	455	495	1142
1563	849604	745707	56	455	495	1142
1564	849674	745778	56	455	495	1142
1566	849462	745707	56	455	495	1142
1567	849533	745778	56	455	495	1142
1568	849604	745848	56	455	495	1142



## TABLE E-26 WELLS WITHIN RESOURCE BLOCK 56

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1569	849604	745778	56	455	495	1142
1570	849533	745707	56	455	495	1142
1573	849462	745778	56	455	495	1142
1574	849392	745707	56	455	495	1142
1577	849392	745778	56	455	495	1142
1578	849462	745848	56	455	495	1142
1579	849321	745778	56	455	495	1142
1583	849321	745848	56	455	495	1142
1585	849745	745848	56	455	495	1142

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee									
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132									
Permit or EPA ID Nu	ımber	API Number		Full Well Name					
R9UIC-AZ3-FY1	1-1			Block 57 Wells - See A	Attached Table E-27				
State			County						
Arizona			Pinal						
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.049658									
Surface Location									
NW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.426531					
ft. from	m (N/S) Line of quart	er section	)	See Attached Table for Individual Well Coordinates.					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	January 2027			rk nd Abandonment n to a Non-Injection Well				
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 57. There are 44 Class III multi-use injection/ recovery wells, 1 dedicated Class III observation, and 3 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 57. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-27a and E-27b.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signa	ture		Date Signed				

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

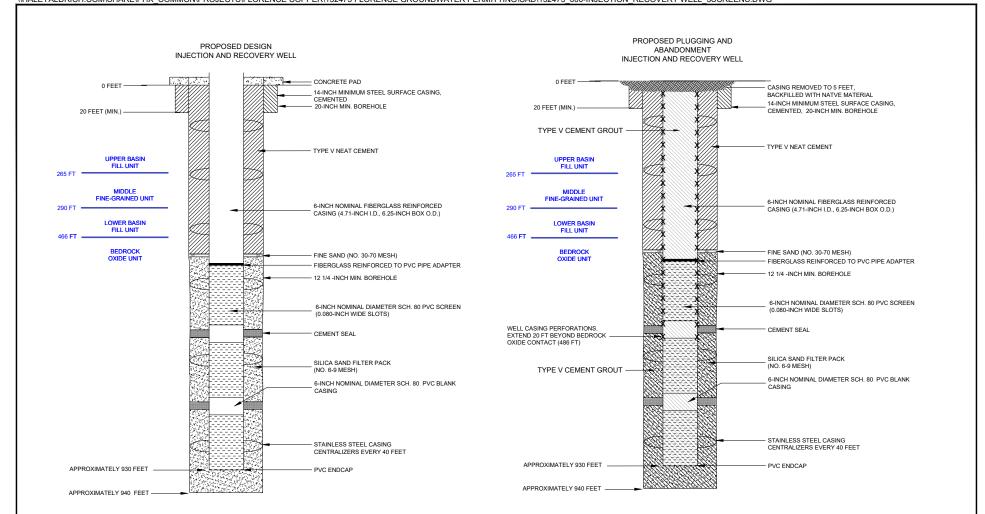
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 57 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-27a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE MIDDI F FINE-GRAINED UNIT FINE-GRAINED UNIT 290 FT LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING BEDROCK BEDROCK OXIDE UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (486 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 930 FEET APPROXIMATELY 930 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 940 FEET APPROXIMATELY 940 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 57 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-27b

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-27 WELLS WITHIN RESOURCE BLOCK 57

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
786	849886	745919	57	466	506	930
787	850099	745990	57	466	506	930
788	850169	746061	57	466	506	930
789	850240	746131	57	466	506	930
790	850169	746131	57	466	506	930
791	850099	746061	57	466	506	930
792	850028	745990	57	466	506	930
793	850099	746131	57	466	506	930
794	850028	746061	57	466	506	930
795	849957	745990	57	466	506	930
796	850240	745990	57	466	506	930
797	850169	745990	57	466	506	930
798	850240	746061	57	466	506	930
810	850452	745990	57	466	506	930
811	850311	745990	57	466	506	930
1628	850240	745778	57	466	506	930
1627	850169	745849	57	466	506	930
782	850099	746164	57	466	506	930
812	850381	745990	57	466	506	930
813	850381	746061	57	466	506	930
814	850311	746061	57	466	506	930
815	850311	746131	57	466	506	930
816	850099	745849	57	466	506	930
817	850028	745919	57	466	506	930
818	849957	745848	57	466	506	930
819	849957	745919	57	466	506	930
820	850240	745919	57	466	506	930
821	850169	745919	57	466	506	930
822	850099	745919	57	466	506	930
823	850240	745849	57	466	506	930
824	850523	745919	57	466	506	930
825	850452	745919	57	466	506	930
826	850381	745919	57	466	506	930
829	850170	746163	57	466	506	930
827	850311	745919	57	466	506	930
967	850240	745636	57	466	506	930
969	850240	745707	57	466	506	930
970	850169	745636	57	466	506	930
1615	850169	745707	57	466	506	930



## TABLE E-27 WELLS WITHIN RESOURCE BLOCK 57

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1618	850099	745778	57	466	506	930
1619	850169	745778	57	466	506	930
1620	850099	745707	57	466	506	930
1624	850028	745849	57	466	506	930
1625	850028	745778	57	466	506	930
017	850381	745778	57	466	506	930
P32	850452	745849	57	466	506	930
P33	850311	745848	57	466	506	930
P34	850311	745707	57	466	506	930

#### Notes:

ft bgs = feet below ground surface



OMB No. 2040-0042

Approval Expires 4/30/2022

**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	ermittee					
Permit or EPA ID No	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1		Arrivallibei		Block 61 Wells - See A	ttoched Toble E 28		
	1-1			Block of Wells - See A	Attached Table E-28		
State Arizona			County Pinal				
Locate well in two	directions from nearest lines of	quarter section and d	Irilling unit Latitude 33	.048659			
Surface Location			Longitude _1	11.436081			
	m (N/S) Line of quartom (E/W) Line of quartom	er section	lange 9E	See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027		Well Rewo	,		
This plugging use injection/ recoinjection and recovand recovery wells depth similar to the	and abandonment applies overy wells, 3 dedicated Classery wells will be of uniform described as perimeter and observed as perimeters and	to wells Class I s III observation, an esign, and will be us observation wells prior to all not have a segmented ent of the Class III wells	II wells to be constructed 4 Class III perimeter well sed for injection and recovery well field build-out. The dedicated well screen.  in resource block 61. Plugging an	ed in block 61. There is planned for constructio on an alternate basis. S perimeter observation well wil d abandonment will be accom	e are 10 Class III multi- n in this block. The some of the injection I have a design and		
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined ar f those individuals im I am aware that there	mediately responsible for obtai	ning the information, I beli	eve that the		
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed		
Tame and official I	(eace type or printy	Oignatu	· ·				

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

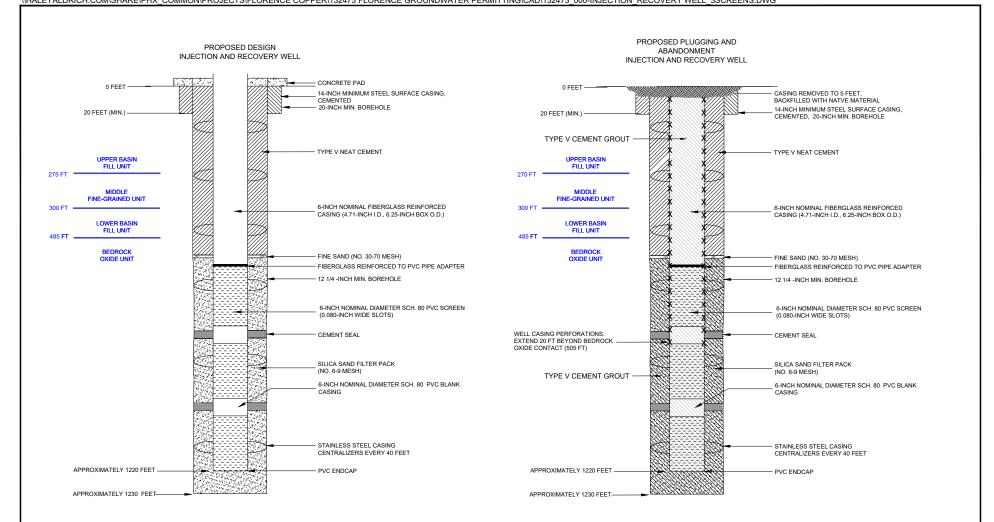
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 61 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-28a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDI F MIDDI F FINE-GRAINED UNIT FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING BEDROCK OXIDE UNIT FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (505 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1220 FEET APPROXIMATELY 1220 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 1230 FEET APPROXIMATELY 1230 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 61 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-28b

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

## TABLE E-28 WELLS WITHIN RESOURCE BLOCK 61

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2220	847199	745423	61	485	525	1220
2221	847269	745493	61	485	525	1220
2222	847340	745564	61	485	525	1220
2224	847269	745564	61	485	525	1220
2225	847199	745493	61	485	525	1220
2276	847199	745564	61	485	525	1220
2277	847270	745620	61	485	525	1220
2280	847174	745676	61	485	525	1220
2281	847199	745635	61	485	525	1220
037	847057	745352	61	485	525	1220
O38	847057	745635	61	485	525	1220
O39	847057	745776	61	485	525	1220
P73	847128	745423	61	485	525	1220
P74	847128	745564	61	485	525	1220
P75	847104	745676	61	485	525	1220
P77	846988	745848	61	485	525	1220

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132								
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1	1-1			Block 62 Wells - See A	Attached Table E-29			
State			County					
Arizona			Pinal					
Locate well in two	lirections from nearest lines of	quarter section and di	illing unit Latitude 33	.048592				
Surface Location			Longitude _1	11 434611				
SE 1/4 of SV	1/4 of Section 28	Township 4S Ra	ange 9E					
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	✓ Notice Prior to Work			Well Rewo	rk			
Class II	Date Expected to Comme	Ince January 2027		Diversion of	ad Abaadaaaa			
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well			
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 62. There are 51 Class III multi-use injection/ recovery wells, planned for construction in this block. The injection and recovery wells will be used as perimeter and observation wells prior to well field build-out.  The work performed includes plugging and abandonment of the Class III wells in resource block 62. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figure E-29.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

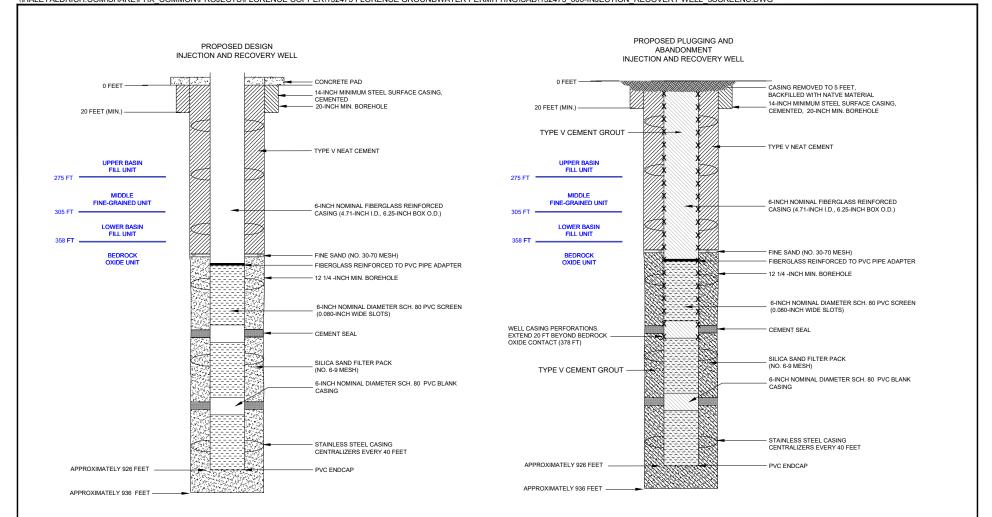
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 62 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-29

# TABLE E-29 WELLS WITHIN RESOURCE BLOCK 62

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2030	847695	745283	62	358	398	926
2099	847552	745705	62	358	398	926
2100	847623	745635	62	358	398	926
2101	847624	745705	62	358	398	926
2102	847623	745776	62	358	398	926
2103	847976	745635	62	358	398	926
2104	847906	745564	62	358	398	926
2105	847835	745493	62	358	398	926
2106	847764	745564	62	358	398	926
2107	847835	745635	62	358	398	926
2108	847906	745705	62	358	398	926
2110	847906	745635	62	358	398	926
2111	847835	745564	62	358	398	926
2112	847764	745493	62	358	398	926
2113	847694	745635	62	358	398	926
2114	847764	745705	62	358	398	926
2115	847835	745776	62	358	398	926
2117	847835	745705	62	358	398	926
2118	847764	745635	62	358	398	926
2119	847694	745564	62	358	398	926
2120	847694	745776	62	358	398	926
2121	847764	745847	62	358	398	926
2122	847764	745776	62	358	398	926
2123	847694	745705	62	358	398	926
2133	848047	745564	62	358	398	926
2139	847835	745423	62	358	398	926
2140	847906	745493	62	358	398	926
2141	847976	745564	62	358	398	926
2143	847906	745423	62	358	398	926
2144	847976	745493	62	358	398	926
2207	847552	745564	62	358	398	926
2208	847552	745635	62	358	398	926
2209	847481	745581	62	358	398	926
2210	847481	745635	62	358	398	926
2211	847577	745523	62	358	398	926
2212	847623	745493	62	358	398	926
2213	847623	745564	62	358	398	926
2214	847764	745423	62	358	398	926
2215	847694	745493	62	358	398	926



## TABLE E-29 WELLS WITHIN RESOURCE BLOCK 62

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2216	847693	745445	62	358	398	926
2217	847835	745352	62	358	398	926
2218	847473	745482	62	358	398	926
2223	847411	745527	62	358	398	926
2266	847764	745390	62	358	398	926
2237	847508	745455	62	358	398	926
2236	847693	745332	62	358	398	926
2235	847764	745281	62	358	398	926
452	847695	745848	62	358	398	926
2227	847552	745423	62	358	398	926
2229	847600	745396	62	358	398	926
2233	847623	745352	62	358	398	926

#### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address I	Phone Number and/or Email of P	ermittee	, ,, <u> </u>		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	cimitec			
Permit or EPA ID Nu	ımhor	ADI Number		Full Well Name	
		API Number			1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1
R9UIC-AZ3-FY1	1-1			Block 63 Wells - See A	Attached Table E-30
State			County		
Arizona			Pinal		
Locate well in two of Surface Location	directions from nearest lines of	quarter section and	drilling unit Latitude 33	3.048583	
	1/4 of Section 20	Township 4G	Longitude _1	11.432288	
	m (N/S) Line of quart	er section	Range 9E	See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  ✓ Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well
planned for const on an alternate b	truction in this block. The inject asis. Some of the injection an includes plugging and abandonme	ion and recovery well d recovery wells will b ent of the Class III wells	ted in block 63. There are 51 Class Is will be of uniform design, an e used as perimeter and observat in resource block 63. Plugging ar Z3-FY11-1. Plugging and abandor	d will be used for injection wells prior to well field built abandonment will be accomed.	n and recovery d-out. nplished following
		0-	rtification		
attachments a information is	nd that, based on my inquiry of	ersonally examined a those individuals im I am aware that there	ITITICATION  nd am familiar with the information  mediately responsible for obtain  are significant penalties for su	ining the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signati	ure		Date Signed
	. 21 1 - 7				

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

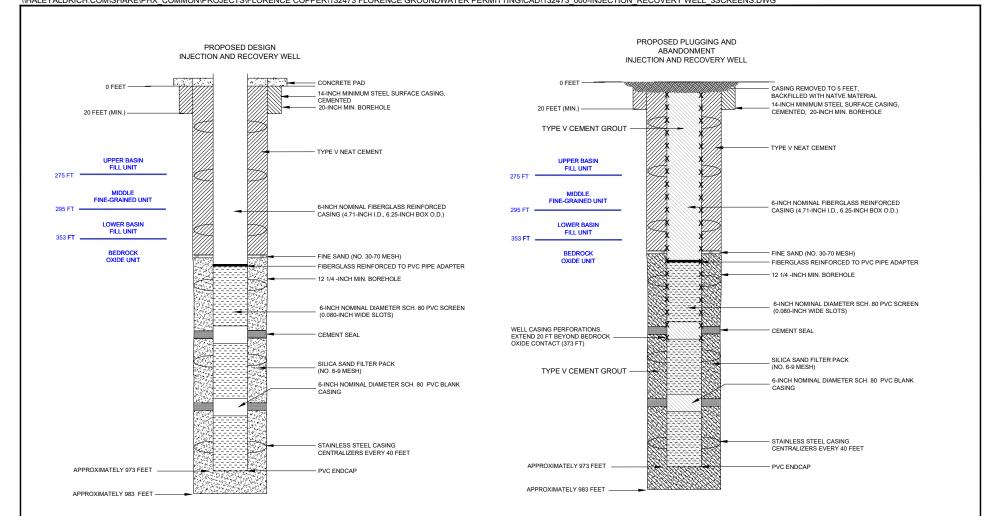
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 63 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-30

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

## TABLE E-30 WELLS WITHIN RESOURCE BLOCK 63

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
464	848401.6491	745848.4602	63	353	393	973
1635	848543.0287	745424.2398	63	353	393	973
1636	848613.7394	745494.9505	63	353	393	973
1637	848684.4501	745565.6612	63	353	393	973
1638	848613.7394	745424.2505	63	353	393	973
1639	848684.4501	745494.9612	63	353	393	973
1641	848755.1714	745565.6826	63	353	393	973
1646	848472.3074	745282.8185	63	353	393	973
1647	848472.3074	745353.5185	63	353	393	973
1648	848401.5967	745282.8078	63	353	393	973
1652	848543.018	745353.5292	63	353	393	973
2037	848260.2064	745388.8383	63	353	393	973
2044	848330.8957	745353.5068	63	353	393	973
2145	848259.1608	745493.4174	63	353	393	973
2146	848329.8714	745564.1281	63	353	393	973
2147	848400.5821	745634.8388	63	353	393	973
2148	848471.2928	745705.5494	63	353	393	973
2149	848542.0035	745776.2601	63	353	393	973
2150	848520.449	745705.5494	63	353	393	973
2151	848471.2821	745634.8388	63	353	393	973
2152	848400.5714	745564.1281	63	353	393	973
2153	848329.8608	745520.0354	63	353	393	973
2154	848188.4608	745564.1174	63	353	393	973
2155	848259.1714	745634.8281	63	353	393	973
2156	848329.8821	745705.5388	63	353	393	973
2157	848400.5928	745776.2494	63	353	393	973
2158	848471.3035	745846.9601	63	353	393	973
2159	848471.2928	745776.2494	63	353	393	973
2160	848400.5821	745705.5388	63	353	393	973
2161	848329.8714	745634.8281	63	353	393	973
2162	848259.1608	745564.1174	63	353	393	973
2163	848188.4501	745493.4067	63	353	393	973
2164	848329.8821	745776.2388	63	353	393	973
2165	848259.1714	745705.5281	63	353	393	973
2166	848188.4608	745634.8174	63	353	393	973
2167	848117.7501	745564.1067	63	353	393	973
2168	848188.4501	745444.3655	63	353	393	973
2177	848683.4035	745634.8601	63	353	393	973
2178	848612.6928	745564.1494	63	353	393	973



## TABLE E-30 WELLS WITHIN RESOURCE BLOCK 63

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2179	848541.9821	745493.4388	63	353	393	973
2180	848471.2714	745422.7281	63	353	393	973
2181	848329.8608	745422.7174	63	353	393	973
2182	848400.5714	745466.6131	63	353	393	973
2183	848503.1242	745531.5875	63	353	393	973
2184	848568.9288	745610.9406	63	353	393	973
2185	848622.826	745705.5601	63	353	393	973
2187	848612.6928	745634.8494	63	353	393	973
2188	848541.9821	745564.1388	63	353	393	973
2189	848471.2714	745493.4281	63	353	393	973
2190	848400.5608	745422.7174	63	353	393	973
2198	848400.5501	745352.0067	63	353	393	973

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee			
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Λ,				
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			Block 64 Wells - See A	Attached Table E-31
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dr	rilling unit Latitude 33	.048598	
Surface Location			Longitude _1	11 430035	
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	ange 9E		
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	✓ Notice Prior to Work			Well Rewo	,
Class II	Date Expected to Comme	nce January 2027			
✓ Class III				✓ Plugging a	nd Abandonment
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well
	Date Work Ended				
This plugging and al planned for const on an alternate b	pandonment applies to wells Class truction in this block. The inject asis. Some of the injection an includes plugging and abandonment attachment E of the application	III wells to be constructe ion and recovery wells d recovery wells will be ent of the Class III wells in	d in block 64. There are 51 Class will be of uniform design, an used as perimeter and observat n resource block 64. Plugging ar	s III multi-use injection/ reco d will be used for injection ion wells prior to well field buil and abandonment will be accom	overy wells, in and recovery d-out. iplished following
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ine and imprisonment. (Ref. 4)	ersonally examined and those individuals imm I am aware that there a	nediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

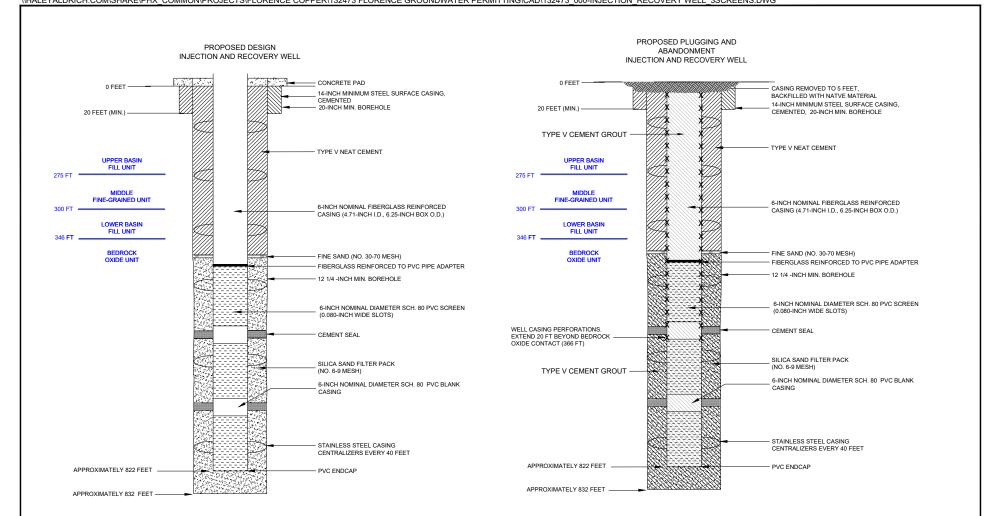
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 64 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-31

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-31 WELLS WITHIN RESOURCE BLOCK 64 EL OPENICE CORPER PROJECT

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
930	849109	745913	64	346	386	822
953	849109	745848	64	346	386	822
1478	849392	745495	64	346	386	822
1479	849462	745566	64	346	386	822
1481	849392	745566	64	346	386	822
1482	849321	745495	64	346	386	822
1483	849321	745424	64	346	386	822
1484	849250	745424	64	346	386	822
1485	849250	745353	64	346	386	822
1490	849109	745283	64	346	386	822
1492	849179	745353	64	346	386	822
1493	849179	745283	64	346	386	822
1565	849392	745636	64	346	386	822
1575	849321	745636	64	346	386	822
1576	849321	745707	64	346	386	822
1580	849250	745707	64	346	386	822
1581	849250	745778	64	346	386	822
1582	849179	745778	64	346	386	822
1584	849179	745848	64	346	386	822
1661	849109	745566	64	346	386	822
1662	849109	745636	64	346	386	822
1663	849038	745566	64	346	386	822
1664	848967	745636	64	346	386	822
1665	849038	745707	64	346	386	822
1666	849109	745707	64	346	386	822
1667	849038	745636	64	346	386	822
1668	849038	745778	64	346	386	822
1669	848967	745707	64	346	386	822
1670	849109	745778	64	346	386	822
1671	849109	745495	64	346	386	822
1672	849321	745566	64	346	386	822
1673	849250	745566	64	346	386	822
1674	849250	745636	64	346	386	822
1675	849179	745636	64	346	386	822
1676	849179	745424	64	346	386	822
1677	849250	745495	64	346	386	822
1678	849179	745495	64	346	386	822
1679	849179	745566	64	346	386	822
1680	849180	745706	64	346	386	822



## TABLE E-31 WELLS WITHIN RESOURCE BLOCK 64

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1737	848967	745424	64	346	386	822
1738	849038	745495	64	346	386	822
1739	848967	745495	64	346	386	822
1742	848897	745566	64	346	386	822
1743	848967	745566	64	346	386	822
1744	848897	745495	64	346	386	822
1746	848897	745636	64	346	386	822
1747	848826	745566	64	346	386	822
1748	849109	745424	64	346	386	822
1749	849038	745424	64	346	386	822
1761	849109	745353	64	346	386	822
1762	849038	745353	64	346	386	822

#### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address. I	Phone Number and/or Email of P	ermittee	7.4.12 7.12 7.4.12 0 1.4.11		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject				
Permit or EPA ID Nu	ımhay	A DI Number		F. II Wall Name	
		API Number		Full Well Name	. 1 170 11 F 22
R9UIC-AZ3-FY1	1-1			Block 65 Wells - See A	Attached Table E-32
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and	d drilling unit Latitude 33	5.048565	
Surface Location					
SW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.427684	
D II	20	. 15	91	See Attached Table	
ft fro	m (N/S) Line of quarto	ar section		for Individual Well	
				Coordinates.	
π. tro	m (E/W) Line of quart	er section.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk
Class II	Date Expected to Comme	nce January 2027	•		
				✓ Plugging a	nd Abandonment
✓ Class III	Report After Work				
Class V	Date Work Ended			Conversion	n to a Non-Injection Well
	Date Work Ended				
This plugging and al planned for consi on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme	III wells to be construing and recovery will recovery wells will ent of the Class III we	that was performed. Use additional incted in block 65. There are 50 Classells will be of uniform design, and be used as perimeter and observatils in resource block 65. Plugging ar AZ3-FY11-1. Plugging and abandor	s III multi-use injection/ reco d will be used for injectic ion wells prior to well field buil and abandonment will be accon	overy wells, on and recovery id-out. nplished following
			ertification		
attachments a information is	nd that, based on my inquiry of	ersonally examined those individuals i I am aware that thei	and am familiar with the informa mmediately responsible for obtai re are significant penalties for su	ining the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signa	nture		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

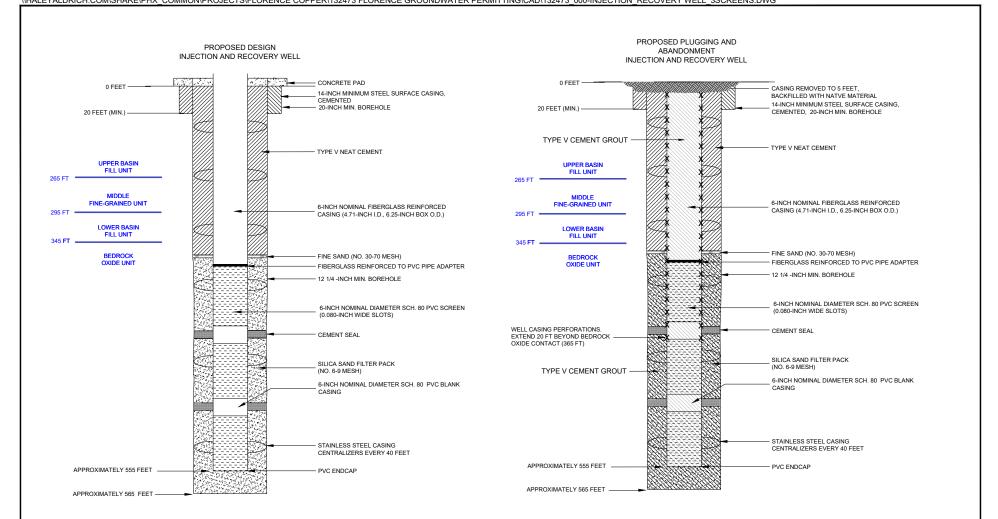
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 65 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-32

# TABLE E-32 WELLS WITHIN RESOURCE BLOCK 65 FLORENCE COPPER PROJECT

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
785	849816	745848	65	345	385	555
968	850169	745566	65	345	385	555
971	850099	745566	65	345	385	555
1083	849816	745283	65	345	385	555
1084	849886	745354	65	345	385	555
1085	849886	745283	65	345	385	555
1086	850099	745495	65	345	385	555
1087	850028	745424	65	345	385	555
1088	850028	745495	65	345	385	555
1089	849957	745424	65	345	385	555
1090	849957	745354	65	345	385	555
1494	849674	745424	65	345	385	555
1495	849604	745495	65	345	385	555
1496	849533	745566	65	345	385	555
1497	849816	745424	65	345	385	555
1498	849816	745354	65	345	385	555
1499	849745	745354	65	345	385	555
1586	849745	745495	65	345	385	555
1587	849816	745566	65	345	385	555
1588	849816	745636	65	345	385	555
1589	849745	745566	65	345	385	555
1590	849674	745495	65	345	385	555
1591	849604	745566	65	345	385	555
1592	849674	745636	65	345	385	555
1593	849745	745707	65	345	385	555
1594	849816	745707	65	345	385	555
1595	849745	745636	65	345	385	555
1596	849674	745566	65	345	385	555
1598	849745	745778	65	345	385	555
1599	849674	745707	65	345	385	555
1600	849604	745636	65	345	385	555
1602	849816	745778	65	345	385	555
1603	849745	745424	65	345	385	555
1604	849816	745495	65	345	385	555
1605	849886	745636	65	345	385	555
1606	849886	745424	65	345	385	555
1607	849886	745495	65	345	385	555
1608	849886	745566	65	345	385	555
1609	849887	745706	65	345	385	555



## TABLE E-32 WELLS WITHIN RESOURCE BLOCK 65

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1610	849886	745778	65	345	385	555
1611	849886	745849	65	345	385	555
1612	849957	745495	65	345	385	555
1613	850028	745566	65	345	385	555
1614	850099	745636	65	345	385	555
1616	849957	745636	65	345	385	555
1617	850028	745707	65	345	385	555
1621	850028	745636	65	345	385	555
1622	849957	745566	65	345	385	555
1623	849957	745778	65	345	385	555
1626	849957	745707	65	345	385	555

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,						
Permit or EPA ID No	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1	1-1			Block 66 Wells - See A	Attached Table E-33		
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	3.048620			
Surface Location			Longitudo	11 42 (400			
SE 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.426409			
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	January 2027			rk nd Abandonment n to a Non-Injection Well		
This plugging use injection/ recoinjection and recovand recovery wells depth similar to the i	use injection/ recovery wells, 1 dedicated Class III observation, and 1 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 66. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signat	ure		Date Signed		
	,				_		

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

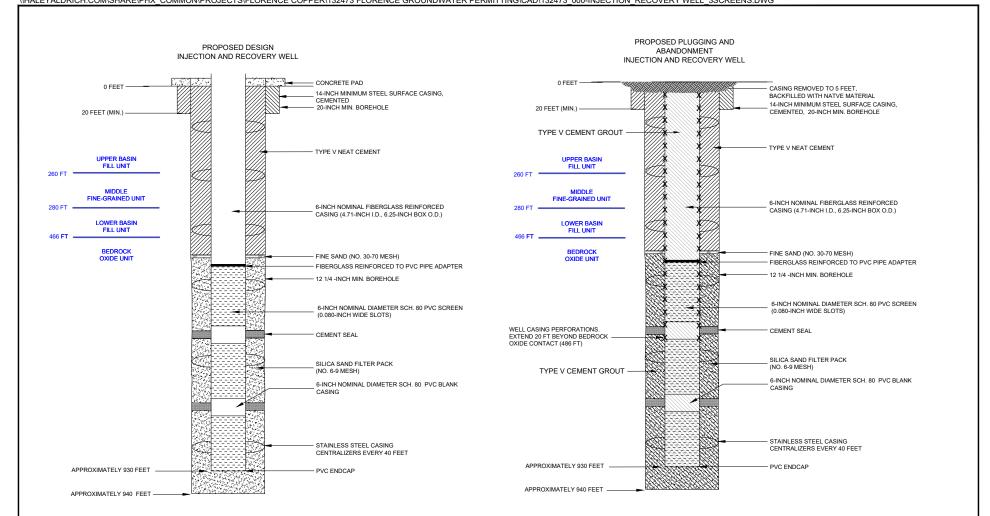
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 66 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-33a

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 260 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE MIDDI F FINE-GRAINED UNIT FINE-GRAINED UNIT 280 FT LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 466 FT BEDROCK OXIDE UNIT FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (486 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 930 FEET APPROXIMATELY 930 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 940 FEET APPROXIMATELY 940 FEET FLORENCE COPPER, INC. FLORENCE, ARIZONA

#### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

ABANDONMENT SCHEMATIC RESOURCE BLOCK 66 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-33b

## TABLE E-33 WELLS WITHIN RESOURCE BLOCK 66

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
977	850240	745566	66	466	506	930
018	850381	745636	66	466	506	930
P35	850311	745566	66	466	506	930

#### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,							
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1	1-1			Block 70 Wells - See	Attached Table E-34			
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	3.047637				
Surface Location								
SW 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.435747				
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	January 2027			ork and Abandonment n to a Non-Injection Well			
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 70. There are 18 Class III multiuse injection/ recovery wells, and 2 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 70. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-34a and E-34b.								
attachments a information is	nd that, based on my inquiry o	ersonally examined a f those individuals im I am aware that there	ertification  and am familiar with the informat  mediately responsible for obtai  are significant penalties for sul	ining the information, I bel	ieve that the			
Name and Official T	itle (Please type or print)	Signat	ure		Date Signed			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

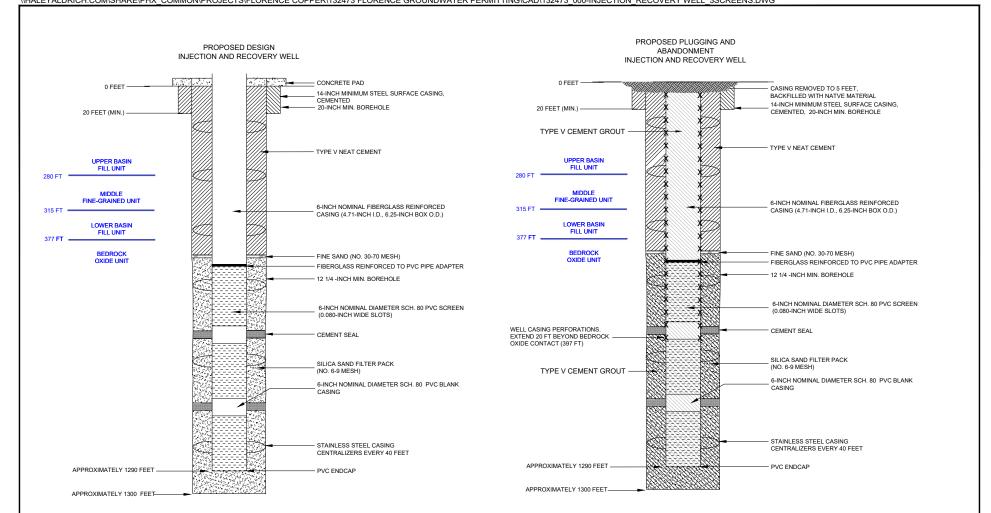
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





**NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 70 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-34a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 280 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 315 FT LOWER BASIN LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 377 FT BEDROCK OXIDE UNIT FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (397 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1290 FEET APPROXIMATELY 1290 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 1300 FEET APPROXIMATELY 1300 FEET FLORENCE COPPER, INC. FLORENCE, ARIZONA

#### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

ABANDONMENT SCHEMATIC RESOURCE BLOCK 70 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-34b

# TABLE E-34 WELLS WITHIN RESOURCE BLOCK 70

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)  Depth to Top of Injection Zone (ft bgs)		Depth to Bottom of Injection Zone (ft bgs)
1883	847412	744929	70	377	417	1290
1885	847412	745000	70	0 377 417		1290
1886	847341	744929	70	377	417	1290
2029	847695	745212	70	377	417	1290
2031	847553	745071	70	377	417	1290
2032	847482	745000	70	377	417	1290
2033	847553	745141	70	377	417	1290
2034	847482	745071	70	377	417	1290
2035	847625	745140	70	377	417	1290
2036	847624	745212	70	377	417	1290
2219	847411	745493	70	377	417	1290
2228	847481	745423	70	377	417	1290
2232	847552	745352	70	377	417	1290
2234	847623	745281	70	377	417	1290
2238	847411	745423	70	377	417	1290
2239	847340	745423	70	377	417	1290
2240	847340	745493	70	377	417	1290
2241	847269	745423	70	377	417	1290
2242	847411	745069	70	377	417	1290
2243	847481	745140	70	377	417	1290
2244	847340	745140	70	377	417	1290
2245	847411	745211	70	377	417	1290
2246	847481	745211	70	377	417	1290
2247	847411	745140	70	377	417	1290
2248	847340	745069	70	377	417	1290
2249	847269	745210	70	377	417	1290
2250	847340	745281	70	377	417	1290
2251	847411	745281	70	377	417	1290
2252	847340	745210	70	377	417	1290
2253	847269	745140	70	377	417	1290
2254	847340	745352	70	377	417	1290
2255	847269	745281	70	377	417	1290
2256	847199	745210	70	377	417	1290
2257	847199	745281	70	377	417	1290
2258	847269	745352	70	377	417	1290
2259	847199	745352	70	377	417	1290
2261	847481	745352	70	377	417	1290
2262	847411	745352	70	377	417	1290
2263	847552	745281	70	377	417	1290



## TABLE E-34 WELLS WITHIN RESOURCE BLOCK 70

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2264	847481	745281	70	377	417	1290
2265	847552	745211	70	377	417	1290
2311	847340	744998	70	377	417	1290
2314	847269	745069	70	377	417	1290
2315	847269	744998	70	377	417	1290
P71	847199	745140	70	377	417	1290
P72	847128	745281	70	377	417	1290

#### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	erimitee						
Permit or EPA ID Nu	ımhor	API Number		Full Well Name				
		API Nullibei			" 1 1T 11 F 25			
R9UIC-AZ3-FY1	1-1			Block 71 Wells - See A	ttached Table E-35			
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	.047609				
Surface Location								
SE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.433454				
ft. fro	m (N/S) Line of quart	er section		See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I  Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027		Well Rewo	-			
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection an includes plugging and abandonm in Attachment E of the application	ion and recovery wel d recovery wells will b ent of the Class III wells	ls will be of uniform design, an e used as perimeter and observat in resource block 71. Plugging ar	d will be used for injection wells prior to well field built abandonment will be accomed abandonment will be accomed to the contract of the co	n and recovery d-out. aplished following			
		_	4161 41					
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined a those individuals im I am aware that there	mediately responsible for obtai	ning the information, I beli	eve that the			
Name and Official T	itle (Please type or print)	Signatu	ire		Date Signed			

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

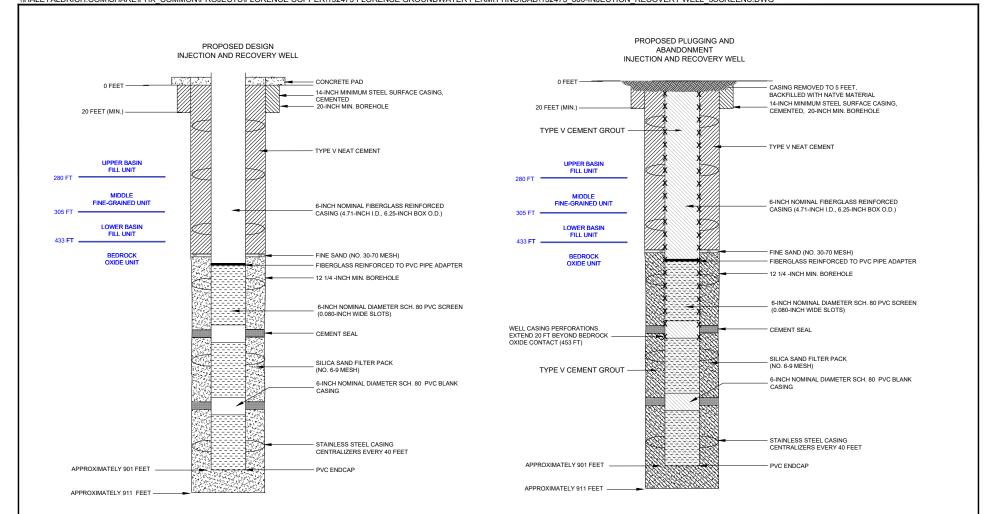
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

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FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 71 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-35

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-35 WELLS WITHIN RESOURCE BLOCK 71

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Bedrock Injection Zone (ft bgs) (ft bgs)		Depth to Bottom of Injection Zone (ft bgs)
1642	848189	745000	71	433	473	901
1643	848260	745071	71	433	473	901
1644	848331	745141	71	433	473	901
1645	848402	745212	71	433	473	901
1649	848331	745212	71	433	473	901
1650	848260	745141	71	433	473	901
1651	848189	745071	71	433	473	901
1660	848119	745000	71	433	473	901
1769	848119	744929	71	433	473	901
1770	848048	744929	71	433	473	901
2038	847977	745283	71	433	473	901
2039	847977	745212	71	433	473	901
2040	848119	745071	71	433	473	901
2041	848189	745141	71	433	473	901
2042	848260	745212	71	433	473	901
2043	848331	745283	71	433	473	901
2045	848260	745283	71	433	473	901
2046	848189	745212	71	433	473	901
2047	848119	745141	71	433	473	901
2048	848049	745140	71	433	473	901
2049	848119	745212	71	433	473	901
2050	848048	745212	71	433	473	901
2051	848260	745354	71	433	473	901
2052	848189	745348	71	433	473	901
2053	848189	745283	71	433	473	901
2054	848119	745283	71	433	473	901
2063	847977	745000	71	433	473	901
2064	847977	745071	71	433	473	901
2071	847907	745141	71	433	473	901
2072	847977	745141	71	433	473	901
2073	847907	745071	71	433	473	901
2079	847836	745212	71	433	473	901
2080	847907	745212	71	433	473	901
2081	847836	745141	71	433	473	901
2084	847836	745264	71	433	473	901
2085	847765	745212	71	433	473	901
2089	848048	745071	71	433	473	901
2090	848048	745000	71	433	473	901
2142	847976	745423	71	433	473	901



## TABLE E-35 WELLS WITHIN RESOURCE BLOCK 71

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2169	848047	745423	71	433	473	901
2170	848118	745423	71	433	473	901
2171	848118	745493	71	433	473	901
2172	848047	745493	71	433	473	901
2174	847976	745368	71	433	473	901
2175	847906	745352	71	433	473	901
2176	848047	745381	71	433	473	901
2196	847906	745265	71	433	473	901
2199	848047	745281	71	433	473	901

#### Notes:

ft bgs = feet below ground surface



OMB No. 2040-0042

Approval Expires 4/30/2022

**\$EPA** 

United States Environmental Protection Agency

# WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee									
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132									
Permit or EPA ID No	umhor	A DI Numbe				E V	Vell Name		
R9UIC-AZ3-FY1		API Numbe	er .			1		Attached Table E-36	
	1-1					Bloci	k /2 Wells - See F	Attached Table E-30	
State Arizona				Pinal					
Locate well in two	directions from nearest lines o	f quarter sect	ion and dr	illing unit	Latitude	33.04766	0		
Surface Location  Longitude -111.431131									
SE 1/4 of SV	V 1/4 of Section 28	Township 45	S Ra	nge 9E	Longitude	-111.431	131		
	m (N/S) Line of quar						ttached Table ividual Well inates.		
Well Class	Timing of Action (pick one)						Type of Action	(pick one)	
Class I	Notice Prior to Work						Well Rewo	rk	
Class II	Date Expected to Comm	ence Januar	y 2027						
✓ Class III							✓ Plugging a	nd Abandonment	
Class V	Report After Work			_			Conversion	n to a Non-Injection Well	
	Date Work Ended								
This plugging and a planned for cons on an alternate b The work performed	bandonment applies to wells Clas truction in this block. The injectasis. Some of the injection at a lincludes plugging and abandonm in Attachment E of the application	s III wells to be tion and reco nd recovery we nent of the Clas	constructed very wells lls will be s III wells in	d in block 72. will be of ur used as perin	There are 49 Claniform design, aneter and observock 72. Plugging	ass III mult and will t ration wells and aband	ti-use injection/ reco ce used for injectic prior to well field bui lonment will be accon	overy wells, on and recovery ld-out. nplished following	
attachments a information is	the penalty of law that I have and that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	of those indivi	amined and duals imm nat there a	ediately resp	onsible for obt	taining the	e information, I beli	eve that the	
Name and Official T	Title (Please type or print)		Signatur	e				Date Signed	

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

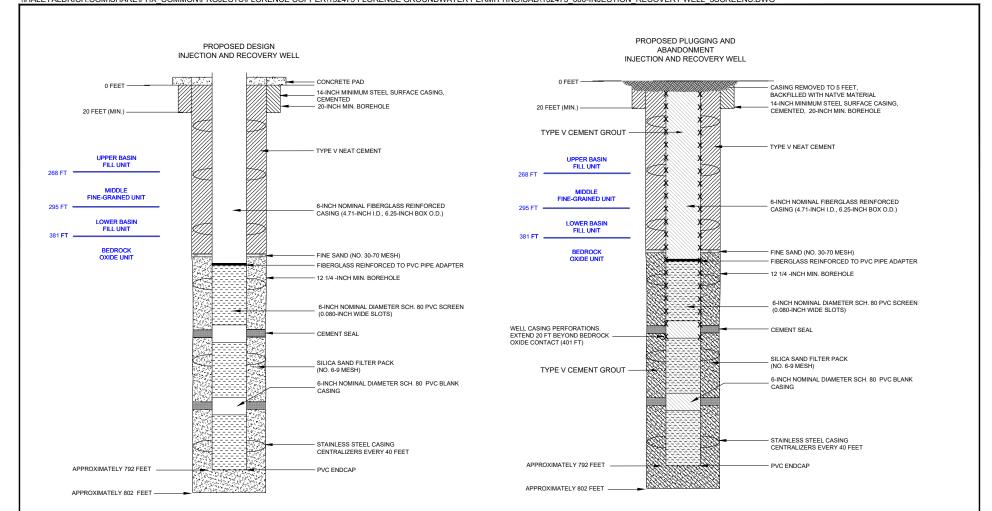
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 72 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-36

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-36 WELLS WITHIN RESOURCE BLOCK 72

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1256	848755	744929	72	381	381 421	
1273	848826	744929	72	381	381 421	
1274	848897	745000	72	381	421	792
1275	848897	745071	72	381	421	792
1276	848826	745000	72	381	421	792
1486	848967	745071	72	381	421	792
1487	849038	745141	72	381	421	792
1488	849038	745212	72	381	421	792
1489	848967	745141	72	381	421	792
1491	849109	745212	72	381	421	792
1681	848684	745424	72	381	421	792
1682	848755	745424	72	381	421	792
1683	848755	745495	72	381	421	792
1686	848684	745000	72	381	421	792
1687	848684	745071	72	381	421	792
1695	848614	745141	72	381	421	792
1696	848684	745141	72	381	421	792
1697	848614	745071	72	381	421	792
1705	848543	745212	72	381	421	792
1707	848543	745141	72	381	421	792
1712	848543	745283	72	381	421	792
1713	848472	745212	72	381	421	792
1718	848684	745354	72	381	421	792
1719	848614	745354	72	381	421	792
1720	848684	745283	72	381	421	792
1721	848614	745283	72	381	421	792
1722	848684	745212	72	381	421	792
1725	848755	745071	72	381	421	792
1726	848755	745000	72	381	421	792
1727	848756	745141	72	381	421	792
1728	848755	745212	72	381	421	792
1729	848755	745354	72	381	421	792
1730	848755	745283	72	381	421	792
1740	848897	745424	72	381	421	792
1741	848826	745495	72	381	421	792
1745	848826	745424	72	381	421	792
1750	848826	745071	72	381	421	792
1751	848897	745141	72	381	421	792
1752	848967	745212	72	381	421	792



# TABLE E-36 WELLS WITHIN RESOURCE BLOCK 72

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1753	848826	745212	72	381	421	792
1754	848897	745283	72	381	421	792
1755	848967	745283	72	381	421	792
1756	848897	745212	72	381	421	792
1757	848826	745141	72	381	421	792
1758	848897	745353	72	381	421	792
1759	848826	745283	72	381	421	792
1760	848826	745353	72	381	421	792
1763	848967	745353	72	381	421	792
1764	849038	745283	72	381	421	792

#### Notes:



OMB No. 2040-0042

**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address F	Phone Number and/or Email of P	ormittee	AID ADAILDONNE	INI ALLIDAVII	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	roject	ermittee			
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1		Arrivamber		Block 73 Wells - See A	ttached Table F-37
	1-1		1 .	Block /5 Wells - See A	tttached Table E-37
State Arizona			Pinal		
Surface Location SW 1/4 of SE	1/4 of Section 28  m (N/S) Line of quarter (E/W) Line of quarter	Township 4S R	- Latitude 33	.047604  11.428879  See Attached Table for Individual Well Coordinates.	
				1	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well
planned for const on an alternate b	pandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application to the application of the applicati	ion and recovery wells d recovery wells will be ent of the Class III wells i	will be of uniform design, an used as perimeter and observati n resource block 73. Plugging an	d will be used for injectio on wells prior to well field buil d abandonment will be accom	n and recovery d-out. nplished following
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4)	ersonally examined an f those individuals imn I am aware that there a	nediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatu	70		Date Signed
Tame and Official I	mo ir rease type or printy	Jigilatui	•		Date Orginea

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

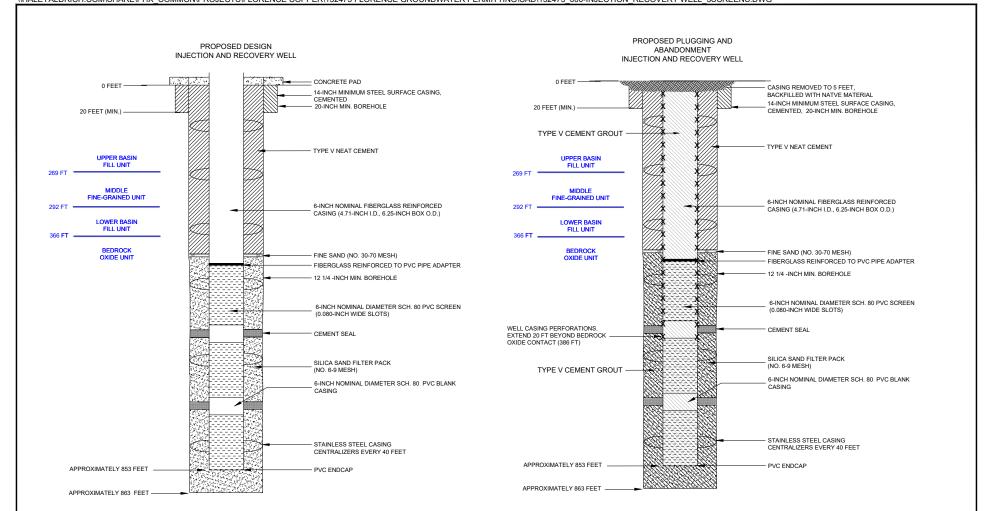
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 73 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-37

# TABLE E-37 WELLS WITHIN RESOURCE BLOCK 73

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1091	849816	745212	73	366	406	853
1100	849533	744929	73	366	406	853
1101	849604	745000	73	366	406	853
1102	849674	745071	73	366	406	853
1103	849745	745141	73	366	406	853
1109	849745	745212	73	366	406	853
1110	849674	745141	73	366	406	853
1111	849604	745071	73	366	406	853
1112	849533	745000	73	366	406	853
1113	849462	744929	73	366	406	853
1500	849604	745424	73	366	406	853
1501	849533	745495	73	366	406	853
1502	849674	745353	73	366	406	853
1503	849745	745283	73	366	406	853
1504	849462	745424	73	366	406	853
1505	849533	745424	73	366	406	853
1506	849462	745495	73	366	406	853
1507	849392	745424	73	366	406	853
1515	849462	745000	73	366	406	853
1516	849533	745071	73	366	406	853
1517	849604	745141	73	366	406	853
1518	849674	745212	73	366	406	853
1520	849391	745071	73	366	406	853
1521	849462	745141	73	366	406	853
1522	849533	745212	73	366	406	853
1523	849604	745283	73	366	406	853
1524	849674	745283	73	366	406	853
1525	849604	745212	73	366	406	853
1526	849533	745141	73	366	406	853
1527	849462	745071	73	366	406	853
1528	849391	745000	73	366	406	853
1530	849604	745354	73	366	406	853
1531	849533	745283	73	366	406	853
1532	849462	745212	73	366	406	853
1533	849391	745141	73	366	406	853
1534	849321	745071	73	366	406	853
1537	849321	745141	73	366	406	853
1538	849391	745212	73	366	406	853
1539	849462	745283	73	366	406	853



# TABLE E-37 WELLS WITHIN RESOURCE BLOCK 73

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1540	849533	745354	73	366	406	853
1541	849462	745354	73	366	406	853
1542	849391	745283	73	366	406	853
1543	849321	745212	73	366	406	853
1544	849250	745141	73	366	406	853
1553	849250	745212	73	366	406	853
1554	849179	745212	73	366	406	853
1555	849391	745354	73	366	406	853
1556	849321	745353	73	366	406	853
1557	849321	745283	73	366	406	853
1558	849250	745283	73	366	406	853

#### Notes:



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee			
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	7,				
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			Block 74 Wells - See A	Attached Table E-38
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.047906	
Surface Location			Longitude -1	11.427022	
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	inge 9E		
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk
Class II	Date Expected to Comme	Ince January 2027		/ Plugging o	nd Abandanment
✓ Class III				→ Flugging a	nd Abandonment
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well
	Data Work Endou				
This plugging a use injection/ reco The injection and r injection and recove design and depth sir	and abandonment applies very wells, 2 dedicated Clas ecovery wells will be of unifor ry wells will be used as perimet milar to the injection and recovery includes plugging and abandonmin Attachment E of the application	to wells Class III s III observation, and m design, and will be er and observation wells p wells, but will not have a sent of the Class III wells in	wells to be constructe 4 Class III perimeter well used for injection and recov prior to well field build-out. The de- iegmented well screen.	ed in block 74. There s planned for constructio ery on an alternate basis. edicated perimeter observation displayment will be accomment will be accomment.	e are 18 Class III multi- n in this block. Some of the n well will have a
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

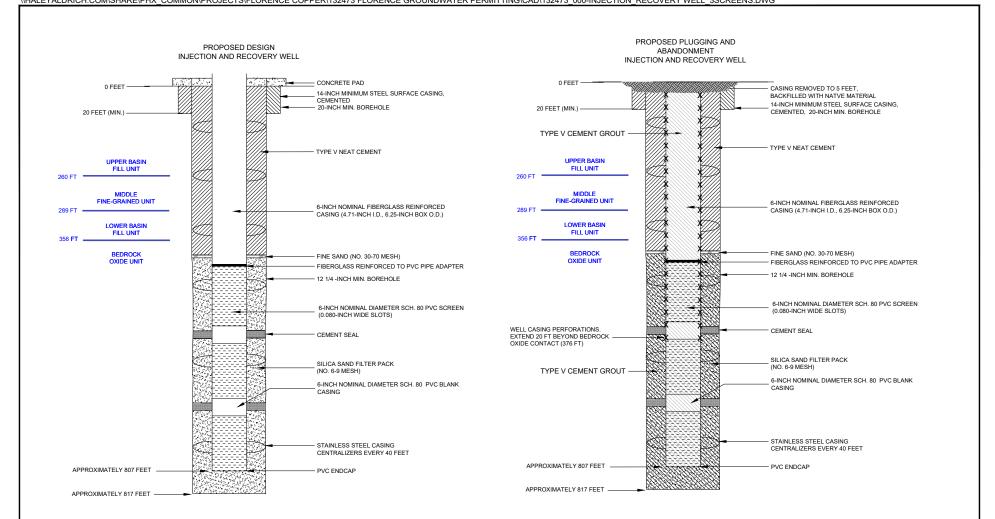
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 74 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-38a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) -20 FEET (MIN.) -CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT LOWER BASIN I OWER BASIN FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 356 FT . 356 FT BEDROCK OXIDE UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (376 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 807 FEET APPROXIMATELY 807 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 817 FEET APPROXIMATELY 817 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 74 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-38b

#### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

TABLE E-38
WELLS WITHIN RESOURCE BLOCK 74
FLORENCE COPPER PROJECT

FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
976	850169	745495	74	356	396	807
978	850240	745424	74	356	396	807
979	850240	745495	74	356	396	807
1122	849886	745212	74	356	396	807
1185	850099	745424	74	356	396	807
1186	850169	745424	74	356	396	807
1193	850028	745141	74	356	396	807
1199	849957	745212	74	356	396	807
1200	850028	745283	74	356	396	807
1201	850099	745283	74	356	396	807
1202	850028	745212	74	356	396	807
1203	849957	745141	74	356	396	807
1204	850028	745354	74	356	396	807
1205	849957	745283	74	356	396	807
1206	850240	745354	74	356	396	807
1207	850169	745354	74	356	396	807
1208	850099	745354	74	356	396	807
1210	850169	745283	74	356	396	807
019	850311	745354	74	356	396	807
O20	850169	745141	74	356	396	807
P36	850311	745424	74	356	396	807
P37	850240	745283	74	356	396	807
P38	850169	745212	74	356	396	807
P39	850099	745141	74	356	396	807

### Notes:



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee			
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,				
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			Block 78 Wells - See A	Attached Table E-39
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.046722	
Surface Location			Longitude _1	11 436024	
SW 1/4 of SV	1/4 of Section 28	Township 4S Ra	nge 9E		
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk
Class II	Date Expected to Comme	nce January 2027		/ Plugging a	nd Abandonment
✓ Class III				▼ Flugging a	na Abanaonment
Class V	Report After Work  Date Work Ended			Conversion	n to a Non-Injection Well
This plugging and al dedicated Class I be of uniform det as perimeter and ol recovery wells, but v	condonment applies to wells Class III observation, and 3 Class sign, and will be used for injective servation wells prior to well field by will not have a segmented well screen includes plugging and abandonment Attachment E of the application	III wells to be constructed III perimeter wells pluction and recovery on uild-out. The dedicated perion.	d in block 78. There are 4 Class anned for construction in the an alternate basis. Some continued or in the serimeter observation well will have resource block 78. Plugging an	III multi-use injection/ recovnis block. The injection and of the injection and recovery e a design and depth similar to dahadanahadahad	rery wells, 2 recovery wells will wells will be used to the injection and
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	9		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

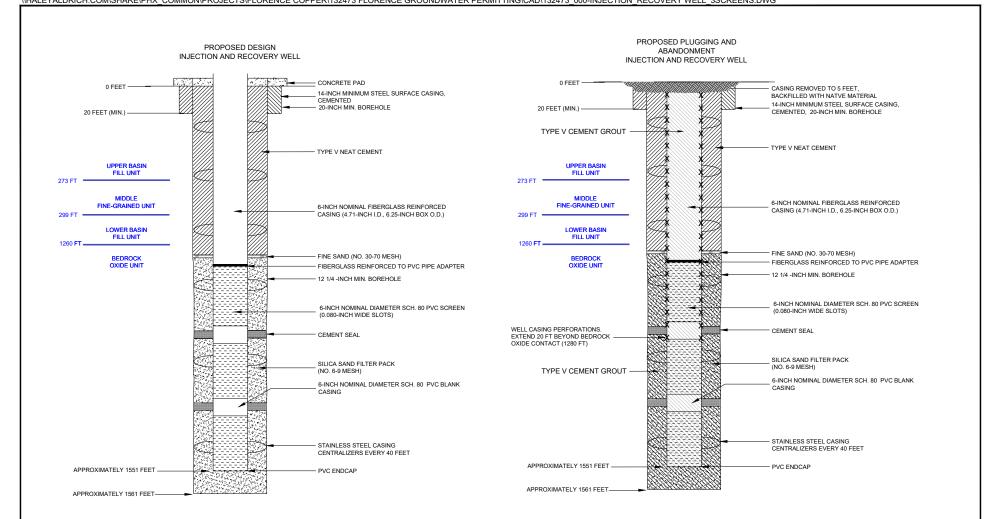
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



ABANDONMENT SCHEMATIC RESOURCE BLOCK 78 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-39a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) -20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN 280 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 315 FT LOWER BASIN LOWER BASIN FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 1260 FT -1260 FT = FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (1280 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1551 FEET APPROXIMATELY 1551 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 1561 FEET APPROXIMATELY 1561 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 78 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-39b

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-39 WELLS WITHIN RESOURCE BLOCK 78

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1884	847341	744858	78	1260	1300	1551
1887	847270	744858	78	1260	1300	1551
1893	847270	744788	78	1260	1300	1551
2310	847269	744928	78	1260	1300	1551
035	847129	744788	78	1260	1300	1551
036	847128	745069	78	1260	1300	1551
P68	847200	744717	78	1260	1300	1551
P69	847200	744858	78	1260	1300	1551
P70	847199	744998	78	1260	1300	1551

#### Notes:



**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee						
Florence Copper F 1575 W Hunt Hw Florence, AZ 8513	roject					
Permit or EPA ID No	ımhay	API Number		Full Well Name		
		API Number			" 1 1T 11- E 40	
R9UIC-AZ3-FY1	1-1			Block 79 Wells - See A	Mached Table E-40	
State			County			
Arizona	directions from nearest lines of	guartar agatian and	Pinal			
Locate well in two t	inections from hearest lines of	quarter section and	drilling unit Latitude 33	.046624		
Surface Location			Longitude 1	11 424570		
SE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude _1	11.434579		
				See Attached Table		
ft. fro	m (N/S) Line of quarto	er section		for Individual Well Coordinates.		
ft. fro	m (E/W) Line of quart	er section.		Ooordinates.		
Well Class	Timing of Action (pick one)			Type of Action	(pick one)	
Class I	✓ Notice Prior to Work			Well Rewo	rk	
Class II	Date Expected to Comme	nce January 2027				
✓ Class III				✓ Plugging a	nd Abandonment	
H	Report After Work			Conversion	n to a Non-Injection Well	
Class V	Date Work Ended				,	
planned for cons on an alternate b	truction in this block. The inject asis. Some of the injection an includes plugging and abandonme	ion and recovery well d recovery wells will b ent of the Class III wells	ted in block 79. There are 50 Class Is will be of uniform design, an e used as perimeter and observat in resource block 79. Plugging ar Z3-FY11-1. Plugging and abandor	d will be used for injection wells prior to well field built abandonment will be accomed.	n and recovery d-out. nplished following	
			4161 41			
attachments a information is	nd that, based on my inquiry of	ersonally examined a those individuals im I am aware that there	rtification  nd am familiar with the informat  mediately responsible for obtai  are significant penalties for su	ning the information, I beli	eve that the	
Name and Official T	itle (Please type or print)	Signati	ıre		Date Signed	

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

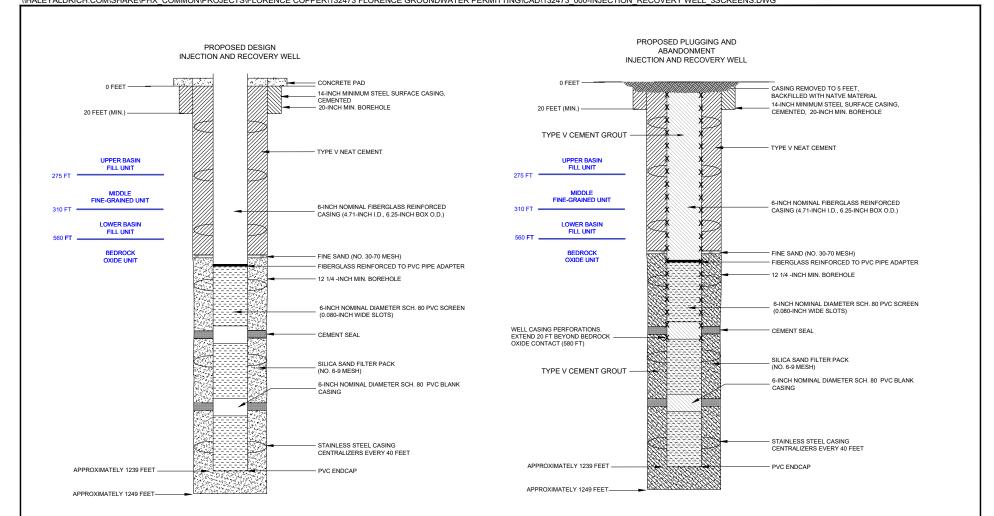
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 79 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-40

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-40 WELLS WITHIN RESOURCE BLOCK 79

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1767	847977	744859	79	560	600	1239
1768	848048	744859	79	560	600	1239
1772	847765	744576	79	560	600	1239
1773	847836	744647	79	560	600	1239
1774	847836	744717	79	560	600	1239
1775	847765	744647	79	560	600	1239
1776	847694	744576	79	560	600	1239
1777	847977	744788	79	560	600	1239
1778	847906	744788	79	560	600	1239
1779	847906	744717	79	560	600	1239
1900	847412	744858	79	560	600	1239
1901	847482	744929	79	560	600	1239
1902	847553	744859	79	560	600	1239
1903	847482	744859	79	560	600	1239
1912	847553	744788	79	560	600	1239
1913	847482	744788	79	560	600	1239
1915	847553	744717	79	560	600	1239
1919	847624	744646	79	560	600	1239
1920	847624	744788	79	560	600	1239
1921	847624	744717	79	560	600	1239
1922	847694	744646	79	560	600	1239
1923	847694	744717	79	560	600	1239
2055	847553	745000	79	560	600	1239
2056	847553	744929	79	560	600	1239
2057	847624	745071	79	560	600	1239
2058	847624	744859	79	560	600	1239
2059	847624	744929	79	560	600	1239
2060	847624	745000	79	560	600	1239
2061	847836	744859	79	560	600	1239
2062	847907	744929	79	560	600	1239
2065	847907	745000	79	560	600	1239
2066	847836	744929	79	560	600	1239
2067	847765	744859	79	560	600	1239
2068	847695	744929	79	560	600	1239
2069	847765	745000	79	560	600	1239
2070	847836	745071	79	560	600	1239
2074	847836	745000	79	560	600	1239
2075	847765	744929	79	560	600	1239
2076	847694	744859	79	560	600	1239



# TABLE E-40 WELLS WITHIN RESOURCE BLOCK 79

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
2077	847695	745071	79	560	600	1239
2078	847765	745141	79	560	600	1239
2082	847765	745071	79	560	600	1239
2083	847695	745000	79	560	600	1239
2086	847695	745141	79	560	600	1239
2087	847907	744859	79	560	600	1239
2088	847977	744929	79	560	600	1239
2091	847765	744717	79	560	600	1239
2092	847765	744788	79	560	600	1239
2093	847694	744788	79	560	600	1239
2094	847836	744788	79	560	600	1239

#### Notes:



**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address F	Phone Number and/or Email of P	ermittee	, ,, <u> </u>		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitec			
Permit or EPA ID Nu	ımher	API Number		Full Well Name	
R9UIC-AZ3-FY1		API Nulliber		Block 80 Wells - See A	ttacked Takle E 41
	1-1			Block 80 Wells - See A	Attached Table E-41
State			County		
Arizona	din at a section of the section of		Pinal		
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	5.046674	
Surface Location			Landania d	44.40000	
SE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.432298	
ft. fro	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well
planned for conston an alternate b	truction in this block. The inject asis. Some of the injection an I includes plugging and abandonme	ion and recovery well d recovery wells will be ent of the Class III wells	ted in block 80. There are 50 Class Is will be of uniform design, an e used as perimeter and observat s in resource block 80. Plugging ar Z3-FY11-1. Plugging and abandor	nd will be used for injection wells prior to well field built about the accondition will be acconditionally be acconditionally will be accordingly will be	on and recovery ld-out. nplished following
			-416141 - ·		
attachments a information is	nd that, based on my inquiry of	ersonally examined a f those individuals im I am aware that there	rtification  nd am familiar with the informatimediately responsible for obtai are significant penalties for su	ining the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signat	ure		Date Signed

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

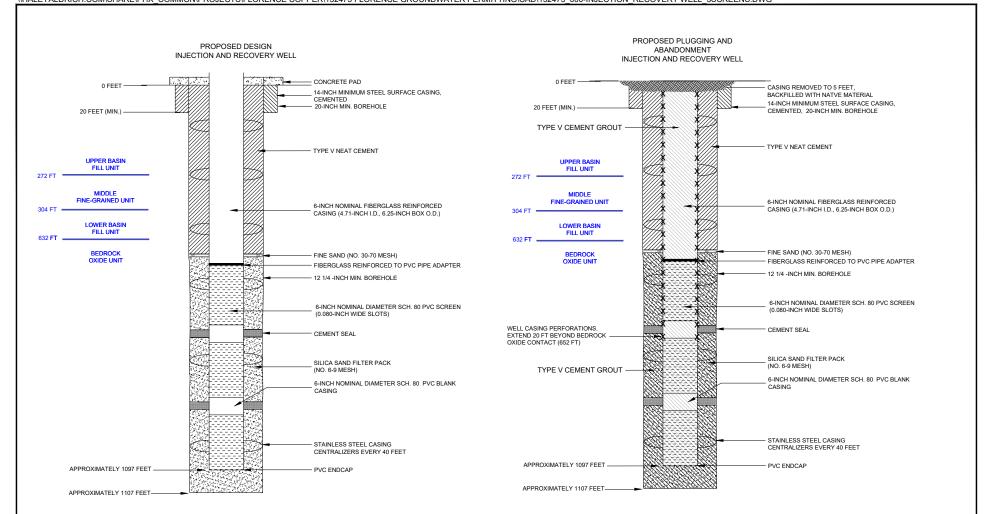
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 80 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-41

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-41 WELLS WITHIN RESOURCE BLOCK 80

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1254	848684	744859	80	380	420	1097
1255	848755	744859	80	632	672	1097
1260	848472	744576	80	632	672	1097
1261	848543	744646	80	632	672	1097
1262	848543	744717	80	632	672	1097
1263	848472	744646	80	632	672	1097
1264	848402	744576	80	632	672	1097
1270	848684	744788	80	632	672	1097
1271	848614	744788	80	632	672	1097
1272	848614	744717	80	632	672	1097
1684	848543	744859	80	632	672	1097
1685	848614	744929	80	632	672	1097
1688	848614	745000	80	632	672	1097
1689	848543	744929	80	632	672	1097
1690	848472	744859	80	632	672	1097
1691	848331	744859	80	632	672	1097
1692	848402	744929	80	632	672	1097
1693	848472	745000	80	632	672	1097
1694	848543	745071	80	632	672	1097
1698	848543	745000	80	632	672	1097
1699	848472	744929	80	632	672	1097
1700	848402	744859	80	632	672	1097
1701	848260	744929	80	632	672	1097
1702	848331	745000	80	632	672	1097
1703	848402	745071	80	632	672	1097
1704	848472	745141	80	632	672	1097
1708	848472	745071	80	632	672	1097
1709	848402	745000	80	632	672	1097
1710	848331	744929	80	632	672	1097
1711	848260	744859	80	632	672	1097
1714	848402	745141	80	632	672	1097
1715	848331	745071	80	632	672	1097
1716	848260	745000	80	632	672	1097
1717	848189	744929	80	632	672	1097
1723	848614	744859	80	632	672	1097
1724	848684	744929	80	632	672	1097
1731	848472	744717	80	632	672	1097
1732	848472	744788	80	632	672	1097
1733	848402	744717	80	632	672	1097



# TABLE E-41 WELLS WITHIN RESOURCE BLOCK 80

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1734	848402	744788	80	632	672	1097
1735	848331	744788	80	632	672	1097
1736	848543	744788	80	632	672	1097
1787	848189	744859	80	632	672	1097
1788	848119	744859	80	632	672	1097
1804	848401	744647	80	632	672	1097
1805	848331	744647	80	632	672	1097
1812	848331	744717	80	632	672	1097
1813	848260	744717	80	632	672	1097
1824	848260	744788	80	632	672	1097
1825	848189	744788	80	632	672	1097

#### Notes:



**\$EPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	erimitee					
Permit or EPA ID Nu	ımher	API Number		Full Well Name			
		AFINUMBER			1 1T 11 E 42		
R9UIC-AZ3-FY1	1-1			Block 81 Wells - See A	Attached Table E-42		
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	3.046665			
Surface Location							
SW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.429989			
ft. fro	m (N/S) Line of quart	er section	9E	See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027			rk nd Abandonment n to a Non-Injection Well		
planned for const on an alternate b	bandonment applies to wells Class truction in this block. The inject asis. Some of the injection and includes plugging and abandonme in Attachment E of the application	ion and recovery wel d recovery wells will b ent of the Class III wells	Is will be of uniform design, an e used as perimeter and observat in resource block 81. Plugging ar	nd will be used for injection wells prior to well field built about the accondition will be acconditionally be acconditionally will be accordingly will be	on and recovery ld-out. nplished following		
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatu	ıre		Date Signed		
	. 21 1 - 7						

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

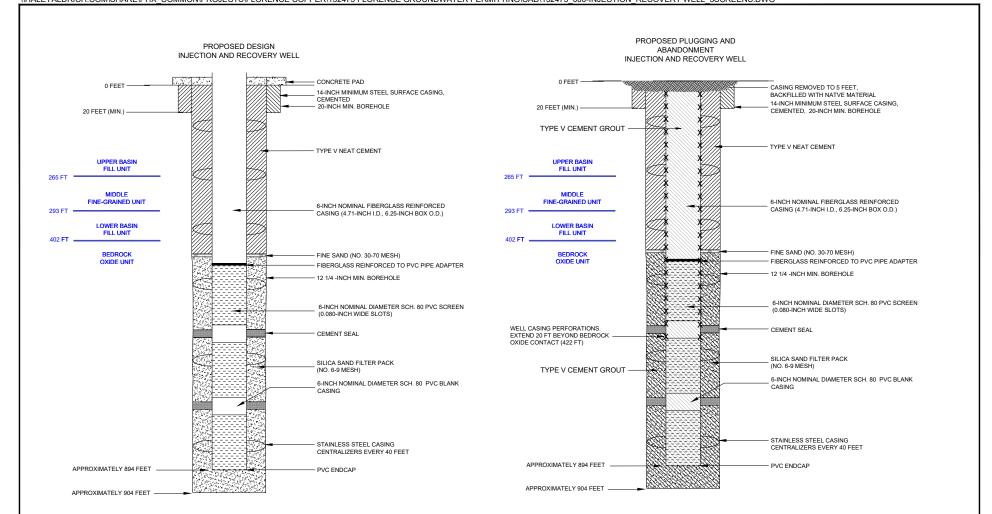
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 81 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-42

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-42 WELLS WITHIN RESOURCE BLOCK 81

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1099	849462	744859	81	402	442	894
1114	849391	744859	81	402	442	894
1123	849109	744576	81	402	442	894
1170	849180	744575	81	402	442	894
1171	849250	744646	81	402	442	894
1172	849179	744646	81	402	442	894
1173	849391	744788	81	402	442	894
1174	849321	744788	81	402	442	894
1175	849321	744717	81	402	442	894
1176	849250	744717	81	402	442	894
1363	848967	744859	81	402	442	894
1364	849038	744929	81	402	442	894
1365	848967	744929	81	402	442	894
1366	848897	744859	81	402	442	894
1367	848967	745000	81	402	442	894
1368	848897	744929	81	402	442	894
1369	848826	744859	81	402	442	894
1370	849109	744859	81	402	442	894
1371	849038	744859	81	402	442	894
1389	849038	744646	81	402	442	894
1395	848967	744717	81	402	442	894
1398	848896	744788	81	402	442	894
1401	849109	744788	81	402	442	894
1402	849038	744788	81	402	442	894
1403	848967	744788	81	402	442	894
1404	849109	744717	81	402	442	894
1405	849038	744717	81	402	442	894
1406	849109	744646	81	402	442	894
1416	849179	744788	81	402	442	894
1417	849179	744717	81	402	442	894
1508	849109	745000	81	402	442	894
1509	849109	745071	81	402	442	894
1510	849038	745000	81	402	442	894
1511	849109	745141	81	402	442	894
1512	849038	745071	81	402	442	894
1513	849109	744929	81	402	442	894
1514	849391	744929	81	402	442	894
1519	849321	745000	81	402	442	894
1529	849321	744929	81	402	442	894



# TABLE E-42 WELLS WITHIN RESOURCE BLOCK 81

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1535	849250	745000	81	402	442	894
1536	849250	745071	81	402	442	894
1545	849179	745071	81	402	442	894
1546	849321	744859	81	402	442	894
1547	849179	744859	81	402	442	894
1548	849250	744859	81	402	442	894
1549	849250	744929	81	402	442	894
1550	849179	744929	81	402	442	894
1551	849179	745000	81	402	442	894
1552	849180	745140	81	402	442	894
1559	849250	744788	81	402	442	894
1706	848614	745212	81	402	442	894

#### Notes:



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132								
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1		Airivamber		Block 82 Wells - See A	ttached Table F-43			
State	1 1		County	Block 62 Wells Sec 11	ttuened Tuble E 15			
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.046682				
Surface Location			Longitudo	11 407000				
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.427992				
	m (N/S) Line of quart			See Attached Table for Individual Well Coordinates.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	<b>√</b> Notice Prior to Work			Well Rewor	·k			
Class II	Date Expected to Comme	nce January 2027						
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work			Conversion	to a Non-Injection Well			
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 82. There are 31 Class III multi-use injection/ recovery wells, 2 dedicated Class III observation, and 3 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 82. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-43a and E-43b.								
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I belie	eve that the			
Name and Official T	itle (Please type or print)	Signature	9		Date Signed			
	. 71 1							

#### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

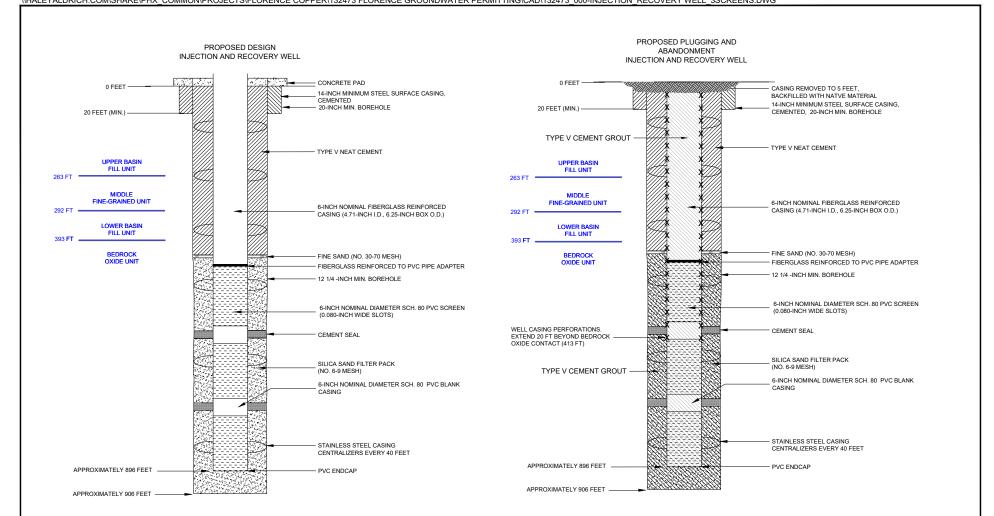
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 82 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-43a

#### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) -20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT 263 FT 263 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 292 FT LOWER BASIN LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 393 FT 393 FT BEDROCK FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (413 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 896 FEET APPROXIMATELY 896 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 906 FEET APPROXIMATELY 906 FEET FLORENCE COPPER, INC.



1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 82 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-43b

# TABLE E-43 WELLS WITHIN RESOURCE BLOCK 82

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock	Depth to Top of Injection Zone	Depth to Bottom of Injection Zone
Number			BIOCK	(ft bgs)	(ft bgs)	(ft bgs)
1092	849674	744859	82	393	433	896
1093	849745	744929	82	393	433	896
1094	849816	745000	82	393	433	896
1095	849816	745071	82	393	433	896
1096	849745	745000	82	393	433	896
1097	849674	744929	82	393	433	896
1098	849604	744859	82	393	433	896
1104	849816	745141	82	393	433	896
1105	849745	745071	82	393	433	896
1106	849674	745000	82	393	433	896
1107	849604	744929	82	393	433	896
1108	849533	744859	82	393	433	896
1115	849816	744859	82	393	433	896
1116	849745	744859	82	393	433	896
1117	849816	744929	82	393	433	896
1118	849886	745071	82	393	433	896
1119	849886	744929	82	393	433	896
1120	849886	745000	82	393	433	896
1121	849887	745141	82	393	433	896
1137	849745	744646	82	393	433	896
1148	849674	744717	82	393	433	896
1154	849604	744788	82	393	433	896
1177	849816	744788	82	393	433	896
1178	849745	744788	82	393	433	896
1179	849674	744788	82	393	433	896
1180	849816	744717	82	393	433	896
1181	849745	744717	82	393	433	896
1192	849957	745071	82	393	433	896
1198	849957	745000	82	393	433	896
1226	849816	744576	82	393	433	896
1230	849816	744646	82	393	433	896
022	849957	744788	82	393	433	896
021	850028	744929	82	393	433	896
P43	849886	744717	82	393	433	896
P42	849886	744859	82	393	433	896
P41	849957	744929	82	393	433	896
P40	850028	745000	82	393	433	896

### Notes:



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address F	Phone Number and/or Email of P	ermittee			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitee			
Permit or EPA ID Nu	ımhor	API Number		Full Well Name	
R9UIC-AZ3-FY1		AFINUMBER		Block 87 Wells - See A	ttacked Table E 44
	1-1			Block 87 Wells - See A	mached Table E-44
State			County		
Arizona			Pinal		
	directions from nearest lines of	quarter section and c	Irilling unit Latitude 33	.045744	
Surface Location			Longitude _1	11.435476	
NW 1/4 of NV	W 1/4 of Section 28	Township 4S	lange 9E	11.133170	
	m (N/S) Line of quarte			See Attached Table for Individual Well Coordinates.	
π. tro	m (E/W) Line of quart	er section.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	✓ Notice Prior to Work			Well Rewo	rk
Class II	Date Expected to Comme	nce January 2027			
✓ Class III				✓ Plugging a	nd Abandonment
Class V	Report After Work			Conversion	n to a Non-Injection Well
Class V	Date Work Ended				-
dedicated Class will be of uniform used as perimeter and recovery wells,  The work performed	bandonment applies to wells Class III observation, and 4 Class design, and will be used for and observation wells prior to well to but will not have a segmented well includes plugging and abandonme in Attachment E of the application	III perimeter wells injection and recovery field build-out. The dedic screen.	planned for construction in t y on an alternate basis. Sor cated perimeter observation well w in resource block 87. Plugging an	his block. The injection and ne of the injection and recoviil have a design and depth sind abandonment will be accom	recovery wells ery wells will be nilar to the injection plished following
		Co	rtification		
attachments a information is	the penalty of law that I have p ind that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined an those individuals im I am aware that there	nd am familiar with the informa mediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

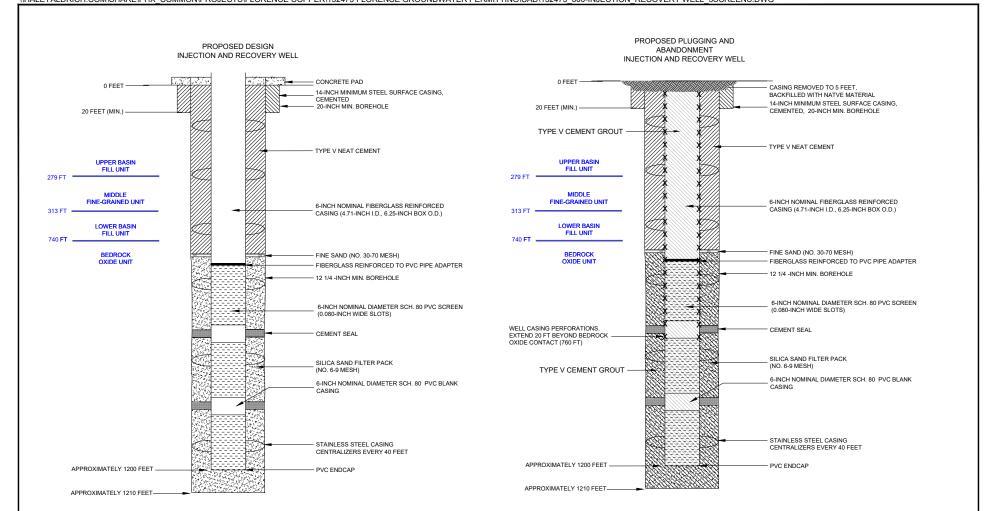
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 87 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-44a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) -CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 279 FT 279 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 313 FT 313 FT LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 740 FT BEDROCK OXIDE UNIT BEDROCK FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (760 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1200 FEET APPROXIMATELY 1200 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 1210 FEET APPROXIMATELY 1210 FEET FLORENCE COPPER, INC. FLORENCE, ARIZONA

### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

ABANDONMENT SCHEMATIC RESOURCE BLOCK 87 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-44b

## TABLE E-44 WELLS WITHIN RESOURCE BLOCK 87

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well	<b>5!</b>	No. al Co.	Resource	Depth to Top of	Depth to Top of	Depth to Bottom of
Number	Easting	Northing	Block	Bedrock (ft bgs)	Injection Zone (ft bgs)	Injection Zone (ft bgs)
1765	847624	744505	87	740	780	1200
1766	847624	744434	87	740	780	1200
1771	847694	744505	87	740	780	1200
1780	847411	744293	87	740	780	1200
1781	847482	744364	87	740	780	1200
1782	847553	744434	87	740	780	1200
1783	847482	744293	87	740	780	1200
1784	847553	744364	87	740	780	1200
1786	847411	744222	87	740	780	1200
1904	847553	744505	87	740	780	1200
1905	847482	744576	87	740	780	1200
1906	847553	744576	87	740	780	1200
1907	847412	744646	87	740	780	1200
1908	847482	744646	87	740	780	1200
1909	847341	744717	87	740	780	1200
1910	847412	744717	87	740	780	1200
1911	847341	744788	87	740	780	1200
1914	847412	744788	87	740	780	1200
1916	847482	744717	87	740	780	1200
1917	847553	744646	87	740	780	1200
1918	847625	744575	87	740	780	1200
1925	847482	744434	87	740	780	1200
1926	847412	744364	87	740	780	1200
1930	847341	744434	87	740	780	1200
1931	847412	744505	87	740	780	1200
1932	847482	744505	87	740	780	1200
1933	847412	744434	87	740	780	1200
1934	847341	744364	87	740	780	1200
1939	847341	744576	87	740	780	1200
1940	847412	744576	87	740	780	1200
1941	847341	744505	87	740	780	1200
1948	847270	744646	87	740	780	1200
1949	847341	744646	87	740	780	1200
1954	847270	744717	87	740	780	1200
O33	847270	744222	87	740	780	1200
034	847200	744505	87	740	780	1200
P64	847341	744152	87	740	780	1200
P65	847341	744293	87	740	780	1200
P66	847270	744434	87	740	780	1200
P67	847270	744576	87	740	780	1200

### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address. F	Phone Number and/or Email of P	ermittee				
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	roject					
Permit or EPA ID Nu	ımhay	API Number		Full Well Name		
		API Number			1 1 T-1.1 - T: 45	
R9UIC-AZ3-FY1	1-1			Block 88 Wells - See A	Mached Table E-45	
State			County			
Arizona	dinactions from magnet lines of		Pinal			
Locate well in two t	directions from nearest lines of	quarter section and	drilling unit Latitude 33	.045677		
Surface Location			Longitudo 1	11 422451		
NE 1/4 of N	W 1/4 of Section 33	Township 4S	Range 9E Longitude -1	11.433451		
				See Attached Table		
ft. fro	m (N/S) Line of quarte	er section		for Individual Well Coordinates.		
ft. fro	m (E/W) Line of quart	er section		Coordinates.		
	Line of quart	or section.				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)	
Class I	Notice Prior to Work			Well Rewo	rk	
Class II	Date Expected to Comme	nce January 2027				
✓ Class III				✓ Plugging a	nd Abandonment	
_	Report After Work			Conversion	n to a Non-Injection Well	
Class V	Date Work Ended				. to a mon injection from	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 88. There are 49 Class III multi-use injection/ recovery wells, planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out.  The work performed includes plugging and abandonment of the Class III wells in resource block 88. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figure E-45.						
attachments a information is	Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signat	ure		Date Signed	

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

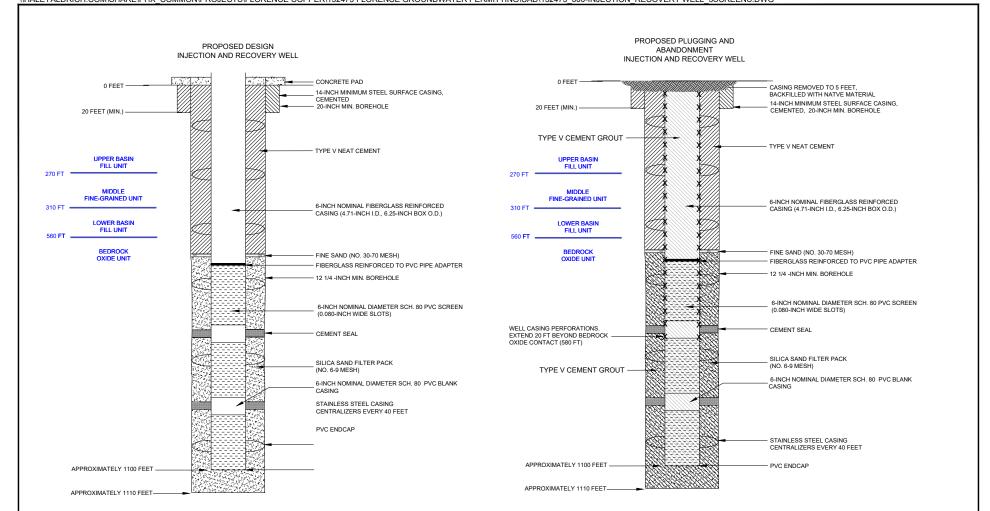
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 88 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-45

# TABLE E-45 WELLS WITHIN RESOURCE BLOCK 88

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1257	848260	744364	88	560	600	1100
1258	848331	744434	88	560	600	1100
1259	848402	744505	88	560	600	1100
1265	848331	744505	88	560	600	1100
1266	848260	744434	88	560	600	1100
1267	848189	744364	88	560	600	1100
1268	848189	744293	88	560	600	1100
1269	848119	744293	88	560	600	1100
1289	848048	744222	88	560	600	1100
1789	847977	744434	88	560	600	1100
1790	847977	744505	88	560	600	1100
1791	847906	744434	88	560	600	1100
1866	847977	744293	88	560	600	1100
1864	847765	744505	88	560	600	1100
1861	847836	744434	88	560	600	1100
1856	847906	744364	88	560	600	1100
1830	848048	744717	88	560	600	1100
1829	848119	744717	88	560	600	1100
1828	848189	744717	88	560	600	1100
1827	848048	744788	88	560	600	1100
1826	848119	744788	88	560	600	1100
1823	848048	744647	88	560	600	1100
1792	847836	744505	88	560	600	1100
1793	847906	744576	88	560	600	1100
1794	847977	744576	88	560	600	1100
1795	847906	744505	88	560	600	1100
1796	847906	744647	88	560	600	1100
1797	847836	744576	88	560	600	1100
1798	847977	744717	88	560	600	1100
1799	847977	744647	88	560	600	1100
1800	847977	744364	88	560	600	1100
1801	848189	744435	88	560	600	1100
1822	848119	744647	88	560	600	1100
1821	848049	744575	88	560	600	1100
1820	848048	744434	88	560	600	1100
1819	848048	744364	88	560	600	1100
1818	848119	744364	88	560	600	1100
1817	848048	744293	88	560	600	1100
1816	848048	744505	88	560	600	1100



## TABLE E-45 WELLS WITHIN RESOURCE BLOCK 88

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1815	848119	744576	88	560	600	1100
1814	848189	744647	88	560	600	1100
1811	848260	744647	88	560	600	1100
1810	848189	744576	88	560	600	1100
1809	848119	744505	88	560	600	1100
1808	848119	744434	88	560	600	1100
1807	848189	744505	88	560	600	1100
1806	848260	744576	88	560	600	1100
1803	848331	744576	88	560	600	1100
1802	848260	744505	88	560	600	1100

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of F	Permittee				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,					
		T .=		T =		
Pollic A 72 EVA		API Number		Full Well Name	" 1 1E 11 E 46	
R9UIC-AZ3-FY1	1-1			Block 89 Wells - See A	Attached Table E-46	
State			County			
Arizona			Pinal			
	directions from nearest lines of	f quarter section and di	rilling unit Latitude 33	.045680		
Surface Location			Longitude _1	11.431128		
	M 1/4 of Section 33 m (N/S) Line of quart m (E/W) Line of quart	er section	ange 9E	See Attached Table for Individual Well Coordinates.		
Well Class	Timing of Action (pick one)			Type of Action	(pick one)	
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk	
Class II	Date Expected to Comme	ence January 2027				
✓ Class III				✓ Plugging a	nd Abandonment	
Class V	Report After Work			Conversion	n to a Non-Injection Well	
	Date Work Ended					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 89. There are 50 Class III multi-use injection/ recovery wells, planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The work performed includes plugging and abandonment of the Class III wells in resource block 89. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figure E-46.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T		0:			Data Signad	
	itle (Please type or print)	Signatur	е		Date Signed	
	itle (Please type or print)	Signatur	e		Date Signed	
	itle (Please type or print)	Signatur	e		Date Signed	

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

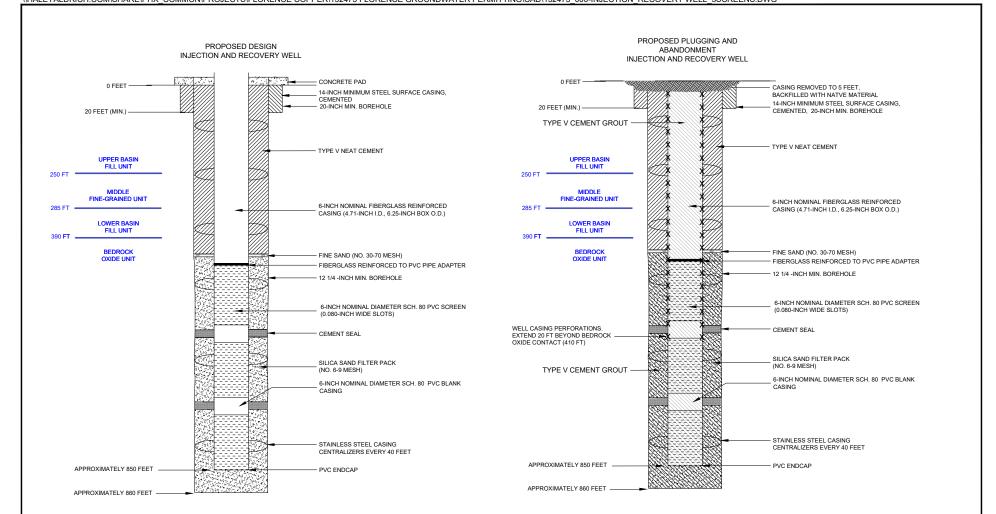
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 89 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-46

### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

# TABLE E-46 WELLS WITHIN RESOURCE BLOCK 89

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1296	848614	744364	89	390	430	850
1297	848684	744434	89	390	430	850
1298	848684	744505	89	390	430	850
1299	848614	744434	89	390	430	850
1305	848543	744505	89	390	430	850
1306	848614	744576	89	390	430	850
1307	848684	744576	89	390	430	850
1308	848614	744505	89	390	430	850
1309	848543	744434	89	390	430	850
1313	848543	744576	89	390	430	850
1312	848614	744646	89	390	430	850
1318	848684	744717	89	390	430	850
1314	848472	744505	89	390	430	850
1320	848684	744293	89	390	430	850
1319	848684	744646	89	390	430	850
1322	848684	744364	89	390	430	850
1323	848755	744505	89	390	430	850
1324	848755	744293	89	390	430	850
1325	848755	744364	89	390	430	850
1326	848755	744434	89	390	430	850
1327	848756	744575	89	390	430	850
1328	848755	744646	89	390	430	850
1329	848755	744788	89	390	430	850
1330	848755	744717	89	390	430	850
1362	848755	744222	89	390	430	850
1375	849109	744505	89	390	430	850
1376	849038	744434	89	390	430	850
1377	848967	744364	89	390	430	850
1378	848896	744293	89	390	430	850
1379	848826	744364	89	390	430	850
1380	848896	744434	89	390	430	850
1381	848967	744505	89	390	430	850
1382	849038	744576	89	390	430	850
1383	849038	744505	89	390	430	850
1384	848967	744434	89	390	430	850
1385	848896	744364	89	390	430	850
1386	848826	744293	89	390	430	850
1387	848826	744505	89	390	430	850
1388	848896	744576	89	390	430	850



## TABLE E-46 WELLS WITHIN RESOURCE BLOCK 89

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1390	848967	744576	89	390	430	850
1391	848896	744505	89	390	430	850
1392	848826	744434	89	390	430	850
1393	848826	744646	89	390	430	850
1394	848896	744717	89	390	430	850
1396	848896	744646	89	390	430	850
1397	848826	744576	89	390	430	850
1399	848826	744717	89	390	430	850
1400	848826	744788	89	390	430	850
1421	848826	744222	89	390	430	850
1462	848967	744646	89	390	430	850

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of F	Permittee					
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,						
		T		T =			
Pollic A 72 EVA		API Number		Full Well Name	1 TE 11 E 47		
R9UIC-AZ3-FY1	1-1			Block 90 Wells - See A	ttached Table E-4/		
State			County				
Arizona			Pinal				
	directions from nearest lines o	f quarter section and d	rilling unit Latitude 33	.046065			
Surface Location			Longitude _1	11.428845			
	m (N/S) Line of quart	er section	ange 9E	See Attached Table for Individual Well Coordinates.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I Class II  ✓ Class III Class V	Notice Prior to Work  Date Expected to Commo	January 2027			rk nd Abandonment n to a Non-Injection Well		
This plugging and al dedicated Class be of uniform deta s perimeter and ol recovery wells, but wells, but wells.	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 90. There are 29 Class III multi-use injection/ recovery wells, 2 dedicated Class III observation, and 5 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 90. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-47a and E-47b.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	Title (Please type or print)	Signatui	re		Date Signed		
	, 71 · · · F 7						
		l I		l l			

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

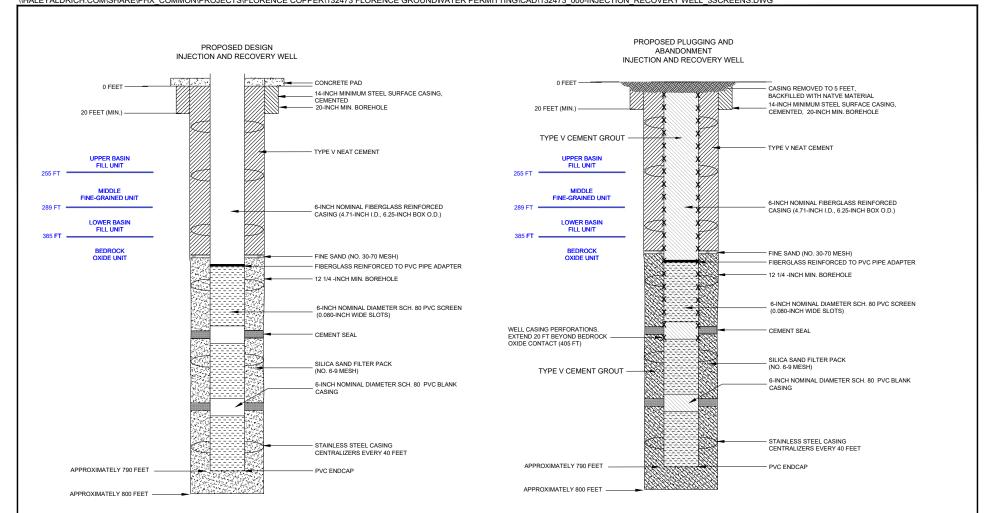
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 90 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-47a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 255 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT LOWER BASIN LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 385 FT 385 FT BEDROCK OXIDE UNIT BEDROCK FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (405 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 790 FEET APPROXIMATELY 790 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 800 FEET APPROXIMATELY 800 FEET FLORENCE COPPER, INC. FLORENCE, ARIZONA

### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

ABANDONMENT SCHEMATIC
RESOURCE BLOCK 90
OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-47b

## TABLE E-47 WELLS WITHIN RESOURCE BLOCK 90

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1127	849674	744505	90	385	425	790
1128	849745	744505	90	385	425	790
1134	849533	744505	90	385	425	790
1135	849604	744576	90	385	425	790
1136	849674	744646	90	385	425	790
1138	849674	744576	90	385	425	790
1139	849604	744505	90	385	425	790
1144	849391	744505	90	385	425	790
1145	849462	744576	90	385	425	790
1146	849533	744646	90	385	425	790
1147	849604	744717	90	385	425	790
1149	849604	744646	90	385	425	790
1150	849533	744576	90	385	425	790
1151	849462	744505	90	385	425	790
1155	849533	744717	90	385	425	790
1156	849462	744646	90	385	425	790
1157	849391	744576	90	385	425	790
1158	849321	744505	90	385	425	790
1160	849250	744505	90	385	425	790
1161	849321	744576	90	385	425	790
1162	849391	744646	90	385	425	790
1163	849462	744717	90	385	425	790
1164	849533	744788	90	385	425	790
1165	849462	744788	90	385	425	790
1166	849391	744717	90	385	425	790
1167	849321	744646	90	385	425	790
1168	849250	744576	90	385	425	790
1169	849179	744505	90	385	425	790
1225	849745	744576	90	385	425	790
023	849816	744364	90	385	425	790
024	849533	744364	90	385	425	790
P44	849886	744434	90	385	425	790
P45	849745	744434	90	385	425	790
P46	849604	744434	90	385	425	790
P47	849462	744434	90	385	425	790
P48	849321	744434	90	385	425	790

Notes:

ft bgs = feet below ground surface



OMB No. 2040-0042

Approval Expires 4/30/2022

**\$EPA** 

United States Environmental Protection Agency

# WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, F	Phone Number and/or Email of P	ermittee			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	<b>y</b> ,				
Permit or EPA ID Nu	ımher	API Number		Full Well Name	
R9UIC-AZ3-FY1		Arrindinger		Block 96 Wells - See A	ttached Table F-48
State	1-1		0	Block 90 Wells - See 19	attached Table L-40
Arizona			Pinal		
	directions from nearest lines of	quarter section and dri	Illing unit Latitude 33.	.045109	
Surface Location	T. 4/4 of Continu 00	Taumahin 40 Da	Longitude -11	11.434644	
NE 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	nge 9E	See Attached Table	
ft fro	m (N/S) Line of quarte	ar agetian		for Individual Well	
				Coordinates.	
II. IFO	m (E/W) Line of quarto	er section.			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	<b>√</b> Notice Prior to Work			Well Rewor	rk
Class II	Date Expected to Comme	nce January 2027		A Blugging o	nd Abandonment
✓ Class III				✓ Plugging a	na Abanaonment
Class V	Report After Work			Conversion	n to a Non-Injection Well
	Date Work Ended				
This plugging and al dedicated Class be of uniform det as perimeter and ol recovery wells, but wells, but wells as the work performed.	bandonment applies to wells Class III observation, and 5 Class sign, and will be used for inje oservation wells prior to well field buill not have a segmented well screin Includes plugging and abandonme in Attachment E of the application to	III wells to be constructed III perimeter wells plottion and recovery on uild-out. The dedicated peen.	t in block 96. There are 30 Class anned for construction in the an alternate basis. Some cerimeter observation well will have resource block 96. Plugging and	III multi-use injection/ reco nis block. The injection and of the injection and recovery e a design and depth similar t d abandonment will be accom	overy wells, 3 recovery wells will wells will be used o the injection and
attachments a information is	the penalty of law that I have poind that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there an	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	<del></del>		Date Signed
	,				

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

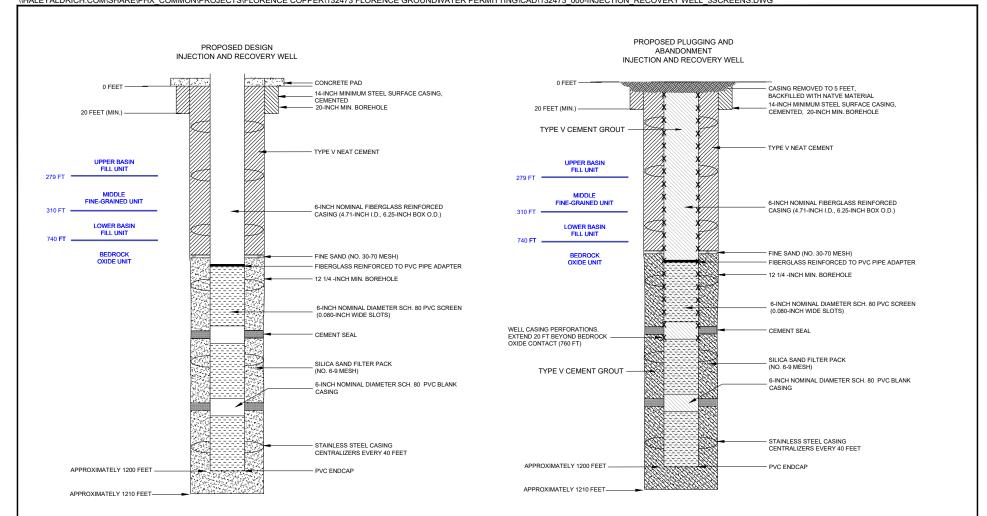
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 96 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-48a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 310 FT LOWER BASIN FILL UNIT FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 740 FT BEDROCK OXIDE UNIT BEDROCK - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (760 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1200 FEET APPROXIMATELY 1200 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 1210 FEET APPROXIMATELY 1210 FEET



1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC
RESOURCE BLOCK 96
OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-48b

## TABLE E-48 WELLS WITHIN RESOURCE BLOCK 96

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1287	847977	744151	96	740	780	1200
1290	848048	744151	96	740	780	1200
1831	847553	744293	96	740	780	1200
1832	847624	744293	96	740	780	1200
1833	847624	744364	96	740	780	1200
1842	847411	744152	96	740	780	1200
1844	847553	744222	96	740	780	1200
1845	847482	744222	96	740	780	1200
1846	847553	744152	96	740	780	1200
1847	847482	744152	96	740	780	1200
1853	847624	744222	96	740	780	1200
1854	847624	744152	96	740	780	1200
1855	847836	744293	96	740	780	1200
1857	847836	744364	96	740	780	1200
1858	847765	744293	96	740	780	1200
1859	847694	744364	96	740	780	1200
1860	847765	744434	96	740	780	1200
1862	847765	744364	96	740	780	1200
1863	847694	744293	96	740	780	1200
1865	847694	744434	96	740	780	1200
1867	847906	744293	96	740	780	1200
1872	847765	744152	96	740	780	1200
1873	847836	744152	96	740	780	1200
1876	847765	744222	96	740	780	1200
1877	847694	744152	96	740	780	1200
1878	847694	744222	96	740	780	1200
1879	847977	744222	96	740	780	1200
1880	847906	744222	96	740	780	1200
1881	847836	744222	96	740	780	1200
1882	847906	744152	96	740	780	1200
030	848119	744010	96	740	780	1200
031	847836	744010	96	740	780	1200
032	847553	744010	96	740	780	1200
P59	848048	744081	96	740	780	1200
P60	847906	744081	96	740	780	1200
P61	847765	744081	96	740	780	1200
P62	847624	744081	96	740	780	1200
P63	847482	744081	96	740	780	1200

### Notes:

ft bgs = feet below ground surface



**ŞEPA** 

United States Environmental Protection Agency

## WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Downit or EDA ID No		A DI Nombre		FII WII N			
Permit or EPA ID Number R9UIC-AZ3-FY11-1				Full Well Name Block 97 Wells - See A	ttached Table E 40		
	1-1			Diock 97 Wells - See A	tuached Table E-49		
State Arizona			County				
Arizona							
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.045064							
Surface Location			Longitude _1	11.432321			
NE 1/4 of NW 1/4 of Section 28 Township 4S Range 9E  See Attached Table for Individual Well Coordinates.  It. from (E/W) Line of quarter section.							
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Commo	January 2027			rk nd Abandonment n to a Non-Injection Well		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  This plugging and abandonment applies to wells Class III wells to be constructed in block 97. There are 30 Class III multi-use injection/ recovery wells, 2 dedicated Class III observation, and 5 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 97. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-49a and E-49b.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signat	ure		Date Signed		
	, 21 · · · F						

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

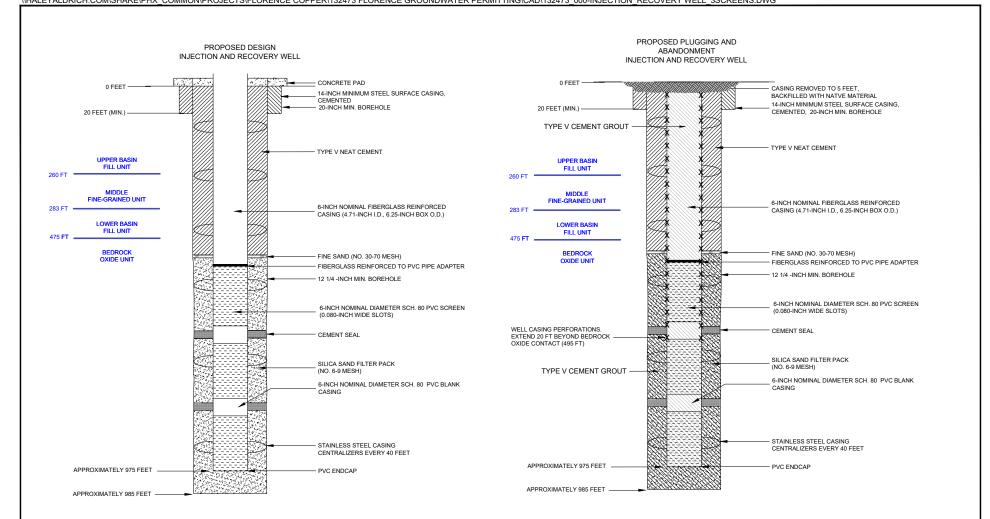
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 97 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-49a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT LOWER BASIN FILL UNIT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 475 FT 475 FT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (495 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 975 FEET APPROXIMATELY 975 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 985 FEET APPROXIMATELY 985 FEET

### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC
RESOURCE BLOCK 97
OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-49b

## TABLE E-49 WELLS WITHIN RESOURCE BLOCK 97

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1295	848543	744293	97	475	485	975
1300	848543	744364	97	475	485	975
1301	848472	744293	97	475	485	975
1302	848331	744293	97	475	485	975
1303	848402	744364	97	475	485	975
1304	848472	744434	97	475	485	975
1310	848472	744364	97	475	485	975
1311	848402	744293	97	475	485	975
1315	848402	744434	97	475	485	975
1316	848331	744364	97	475	485	975
1317	848260	744293	97	475	485	975
1321	848614	744293	97	475	485	975
1342	848543	744152	97	475	485	975
1343	848472	744222	97	475	485	975
1344	848401	744152	97	475	485	975
1345	848401	744222	97	475	485	975
1346	848331	744222	97	475	485	975
1347	848260	744151	97	475	485	975
1354	848260	744222	97	475	485	975
1355	848189	744222	97	475	485	975
1356	848189	744151	97	475	485	975
1357	848119	744151	97	475	485	975
1358	848684	744222	97	475	485	975
1359	848614	744222	97	475	485	975
1360	848543	744222	97	475	485	975
1361	848684	744152	97	475	485	975
1432	848331	744151	97	475	485	975
1433	848614	744152	97	475	485	975
1434	848472	744152	97	475	485	975
1435	848755	744151	97	475	485	975
O28	848684	744010	97	475	485	975
O29	848401	744010	97	475	485	975
P54	848755	744081	97	475	485	975
P55	848614	744081	97	475	485	975
P56	848472	744081	97	475	485	975
P57	848331	744081	97	475	485	975
P58	848189	744081	97	475	485	975

### Notes:

ft bgs = feet below ground surface



**\$EPA** 

United States Environmental Protection Agency

### WELL REWORK RECORD, PLUGGING AND ABANDONMENT PLAN, OR PLUGGING AND ABANDONMENT AFFIDAVIT

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	cimitec						
Permit or EPA ID Nu	ımhor	API Number		Full Well Name				
		API Number			ock 98 Wells - See Attached Table E-50			
R9UIC-AZ3-FY1	1-1			Block 98 Wells - See A	Attached Table E-50			
State			County					
Arizona			Pinal					
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.045068								
Surface Location			Longitude _1	11.430281				
NW 1/4 of NI	1/4 of Section 28	Township 4S	Range 9E	11.130201				
ft. from (N/S) Line of quarter section  ft. from (E/W)  Line of quarter section.  See Attached Table for Individual Well Coordinates.								
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I  Class II  ✓ Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce January 2027		Well Rewo  ✓ Plugging a				
This plugging and abandonment applies to wells Class III wells to be constructed in block 98. There are 15 Class III multi-use injection/ recovery wells, 2 dedicated Class III observation, and 5 Class III perimeter wells planned for construction in this block. The injection and recovery wells will be of uniform design, and will be used for injection and recovery on an alternate basis. Some of the injection and recovery wells will be used as perimeter and observation wells prior to well field build-out. The dedicated perimeter observation well will have a design and depth similar to the injection and recovery wells, but will not have a segmented well screen.  The work performed includes plugging and abandonment of the Class III wells in resource block 98. Plugging and abandonment will be accomplished following procedures defined in Attachment E of the application to modify UIC R9UIC-AZ3-FY11-1. Plugging and abandonment details are shown on the attached Figures E-50a and E-50b.								
			-41£141 - ·					
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signat	ure		Date Signed			

### **INSTRUCTIONS FOR FORM 7520-19**

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

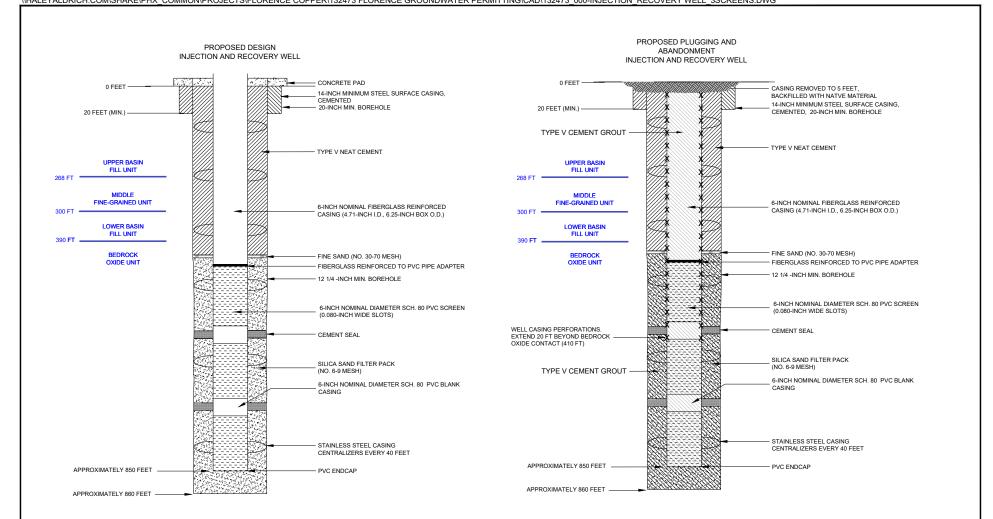
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PAPERWORK REDUCTION ACT NOTICE: The public reporting and recordkeeping burden for this collection of information is estimated to average between 6.0 and 7.9 hours per response, depending on the injection well class. Burden means the total time, effort, or financial resource expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal Agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to the collection of information; search data sources; complete and review the collection of information; and, transmit or otherwise disclose the information. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. Send comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including the use of automated collection techniques to Director, Collection Strategies Division, U.S. Environmental Protection Agency (2822), 1200 Pennsylvania Ave., NW., Washington, D.C. 20460. Include the OMB control number in any correspondence. Do not send the completed forms to this address.





1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 98 TYPICAL INJECTION AND RECOVERY WELL

SCALE: AS SHOWN JULY 2019

FIGURE E-50a

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN **ABANDONMENT** OBSERVATION/PERIMETER WELL OBSERVATION/PERIMETER WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT 268 FT 12 1/4-INCH MIN. BOREHOLE 12 1/4-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 300 FT LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT 390 FT 390 FT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING BEDROCK OXIDE UNIT OXIDE UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, EXTEND 20 FT BEYOND BEDROCK 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS OXIDE CONTACT (410 FT) TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 850 FEET APPROXIMATELY 850 FEET PVC ENDCAP PVC ENDCAP APPROXIMATELY 860 FEET APPROXIMATELY 860 FEET



FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC RESOURCE BLOCK 98 OBSERVATION/PERIMETER WELL

JULY 2019

SCALE: AS SHOWN

FIGURE E-50b

### NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

### TABLE E-50 WELLS WITHIN RESOURCE BLOCK 98

FLORENCE COPPER PROJECT FLORENCE, ARIZONA

Well Number	Easting	Northing	Resource Block	Depth to Top of Bedrock (ft bgs)	Depth to Top of Injection Zone (ft bgs)	Depth to Bottom of Injection Zone (ft bgs)
1418	848967	744151	98	390	430	850
1425	849109	744151	98	390	430	850
1436	849038	744151	98	390	430	850
1437	848896	744151	98	390	430	850
1372	848967	744293	98	390	430	850
1373	849038	744364	98	390	430	850
1374	849109	744434	98	390	430	850
1407	849109	744293	98	390	430	850
1408	849038	744293	98	390	430	850
1409	849109	744364	98	390	430	850
1419	848896	744222	98	390	430	850
1420	848826	744151	98	390	430	850
1422	849109	744222	98	390	430	850
1423	849038	744222	98	390	430	850
1424	848967	744222	98	390	430	850
025	849250	744364	98	390	430	850
026	849250	744222	98	390	430	850
027	848967	744010	98	390	430	850
P49	849179	744434	98	390	430	850
P50	849179	744293	98	390	430	850
P51	849179	744151	98	390	430	850
P52	849038	744081	98	390	430	850
P53	848896	744081	98	390	430	850

### Notes:

ft bgs = feet below ground surface



## **EXHIBIT E-2**

Plugging and Abandonment Forms for Non-Class III Wells within AOR

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	NID ADANDONNE	-1111 / / /	IIDAVII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project							
Permit or EPA ID No	umber	API Number		Full Wel	l Name			
R9UIC-AZ3-FY1	1-1			84				
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and di	rilling unit Latitude 33	.05329314	4			
Surface Location								
SE 1/4 of NE	1/4 of Section 28	Township 4S Ra	ange 9E Longitude -1	11.423229	94			
ft. fro	m (N/S) Line of quarto		<u></u>					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	nce March 2021			Diversing or	ad Abandanasas		
✓ Class III					✓ Plugging ar	nd Abandonment		
Class V	Report After Work				Conversion	to a Non-Injection Well		
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatur	е			Date Signed		
	n, VP - General Manage		2	()		10/3/2019		
Dan Johnson	i, vi - General Manage		2 mil	Post		. ,		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

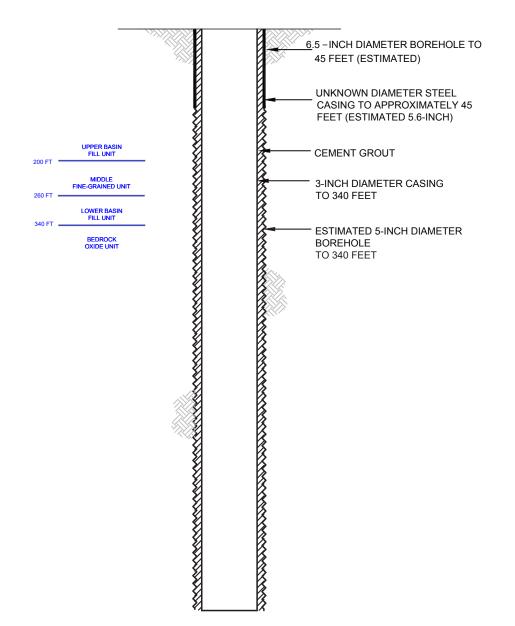
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

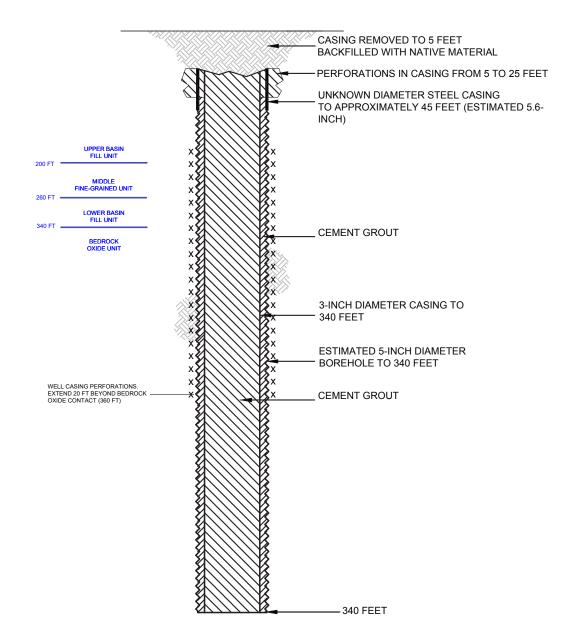
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## PROPOSED DESIGN **EXPLORATION BOREHOLE 84**



## PROPOSED PLUGGING AND **ABANDONMENT EXPLORATION BOREHOLE 84**





FLORENCE COPPER, INC.

ABANDONMENT EXPLORATION **BOREHOLE 84** 



United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number	API Number	Full Well Name					
R9UIC-AZ3-FY11-1		BIA 10B					
State	County						
Arizona	Pinal						
Locate well in two directions from nearest lines of Surface Location  SE 1/4 of SW 1/4 of Section 28  ft. from (N/S) Line of quarter the ft. from (E/W) Line of quarter the ft. from (E/W)	Township 4S Range 9E Longitude -11	04889263 1.4300199					
Well Class Timing of Action (pick one)		Type of Action (pick one)					
Class I Class II Class III Class V  Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	nce March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please type or print)	Signature	Date Signed					
Dan Johnson, VP - General Manage	r	10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN IRRIGATION ABANDONMENT WELL IRRIGATION WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 20-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 20-INCH MIN. STEEL SURFACE 909 FEET (MIN.) 909 FEET (MIN.) CASING, CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 222 FT 22-INCH MIN. BOREHOLE 22-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 300 FT LOWER BASIN FILL UNIT 13-INCH NOMINAL STEEL CASING 13-INCH NOMINAL STEEL CASING FILL UNIT 360 FT FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT - STEEL PIPE ADAPTER - STEEL PIPE ADAPTER OXIDE UNIT WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (380 FT) 13-INCH NOMINAL DIAMETER PERFORATED 13-INCH NOMINAL DIAMETER PERFORATED STEEL STEEL SCREEN, 0.020-INCH WIDE SLOTS SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)



APPROXIMATELY 2006 FEET

APPROXIMATELY 2006 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC IRRIGATION WELL BIA 10B

STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET

STEEL ENDCAP

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 2006 FEET

APPROXIMATELY 2006 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

STEEL ENDCAP

CENTRALIZERS EVERY 40 FEET

**≎EPA** 

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	7,							
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1		Airitamber		BIA 9				
State			County	Birry				
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.04917142				
Surface Location			Longitude _11	11 4359237				
SW 1/4 of SV	1/4 of Section 28	Township 4S Ra	inge 9E	11.4339231				
	m (N/S) Line of quart							
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	✓ Notice Prior to Work			Well Rewo	rk			
Class II	Date Expected to Comme	ence March 2021						
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work			Conversion	n to a Non-Injection Well			
	Date Work Ended							
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attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the			
Name and Official T	itle (Please type or print)	Signatur	е		Date Signed			
Dan Johnson	n, VP - General Manage	r	2 mil		10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN IRRIGATION ABANDONMENT WELL IRRIGATION WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 20-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 20-INCH MIN. STEEL SURFACE 254 FEET (MIN.) 254 FEET (MIN.) CASING, CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 22-INCH MIN. BOREHOLE 22-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 370 FT 370 FT LOWER BASIN 16-INCH NOMINAL STEEL CASING 16-INCH NOMINAL STEEL CASING FILL UNIT **FILL UNIT** - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT - STEEL PIPE ADAPTER - STEEL PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (440 FT) 16-INCH NOMINAL DIAMETER PERFORATED STEEL 16-INCH NOMINAL DIAMETER PERFORATED STEEL SCREEN, 0.020-INCH WIDE SLOTS SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

ALDRICH

APPROXIMATELY 495 FEET

APPROXIMATELY 495 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

# ABANDONMENT SCHEMATIC IRRIGATION WELL BIA 9

SEPTEMBER 2019

SCALE: AS SHOWN FIGURE 1

STAINLESS STEEL CASING

STEEL ENDCAP

CENTRALIZERS EVERY 40 FEET

### NOTES

APPROXIMATELY 495 FEET

APPROXIMATELY 495 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

STEEL ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number	API Number	Full Well Name					
R9UIC-AZ3-FY11-1		DM-A					
State	County						
Arizona	Pinal						
Locate well in two directions from nearest lines of Surface Location  NE 1/4 of SW 1/4 of Section 28  ft. from (N/S) Line of quarter ft. from (E/W) Line of quarter ft.	Township 4S Range 9E Longitude -1	.050933					
Well Class Timing of Action (pick one)		Type of Action (pick one)					
Class I Class II Class III Class III Report After Work Date Work Ended	March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please type or print)	Signature	Date Signed					
Dan Johnson, VP - General Manage	r 2	10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

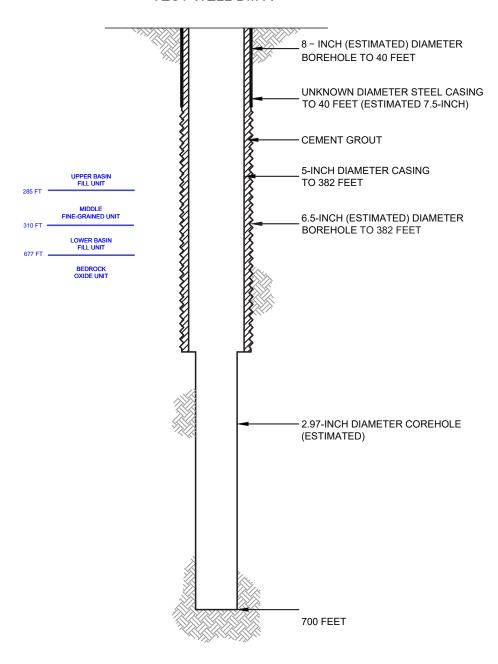
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

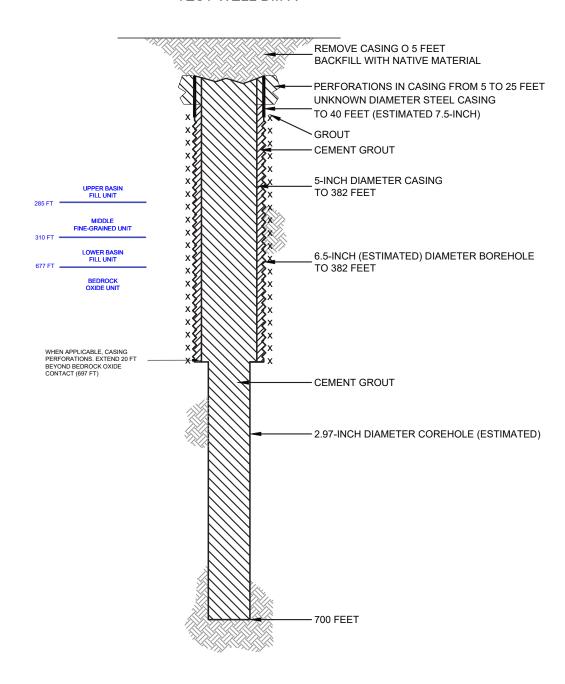
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### PROPOSED DESIGN TEST WELL DM-A



### PROPOSED PLUGGING AND ABANDONMENT TEST WELL DM-A





FLORENCE COPPER, INC.

ABANDONMENT SCHEMATIC TEST WELL DM-A



United States Environmental Protection Agency

Name and Address, P	hone Number and/or Email of P	ermittee						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	,							
Permit or EPA ID Nu	mber	API Number		Full V	Well Name	1		
R9UIC-AZ3-FY11		Airitumboi		DM-				
State			County	D.1.1				
Arizona			Pinal					
Locate well in two d	irections from nearest lines of	quarter section a	nd drilling unit Latitude 3	3.05092	827			
Surface Location			_ Longitude _ j	111.426	5146			
NW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E					
ft. from	Line of quart  (E/W) Line of quart							
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	nce March 2021						
✓ Class III					✓ Plugging a	nd Abandonment		
Class V	Report After Work				Conversion	to a Non-Injection Well		
Glass v	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official Ti	tle (Please type or print)	Sigr	nature			Date Signed		
Dan Johnson	, VP - General Manage	r	Daniel	Sel sel		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

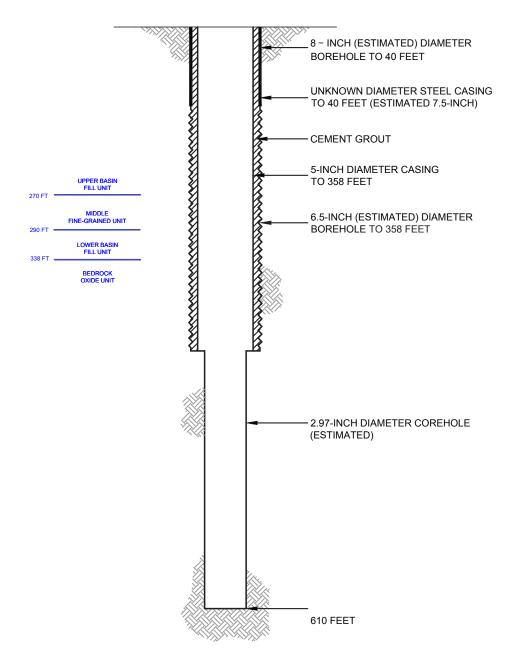
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

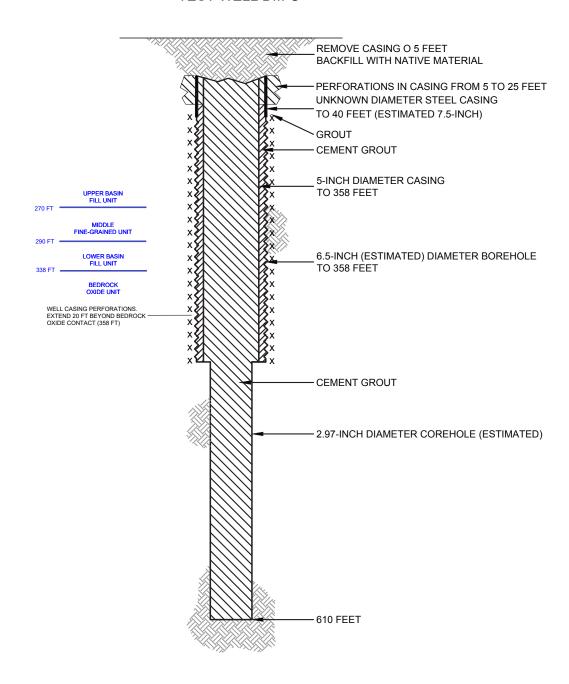
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### PROPOSED DESIGN TEST WELL DM-C



### PROPOSED PLUGGING AND ABANDONMENT TEST WELL DM-C





FLORENCE COPPER, INC.

ABANDONMENT SCHEMATIC TEST WELL DM-C



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	-111 // // /	IDAVII			
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project	STIMES STATE OF THE STATE OF TH						
Permit or EPA ID Nu	ımber	API Number		Full Well N	lame			
R9UIC-AZ3-FY1				DM-D				
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.05219116				
Surface Location						_		
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	Inge 9E Longitude -1	11.4279603				
ft. from	m (N/S) Line of quarte	er section	7.5					
Well Class	Timing of Action (pick one)			1	Type of Action (բ	oick one)		
Class I	<b>✓</b> Notice Prior to Work				Well Rework	(		
Class II	Date Expected to Comme	mce March 2021				d Abandanmant		
✓ Class III				V	/ Plugging an	d Abandonment		
Class V	Report After Work		_		Conversion	to a Non-Injection Well		
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signature	e			Date Signed		
	n, VP - General Manage	r	Dail	Coleman Colema	-	10/3/2019		
				,				

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

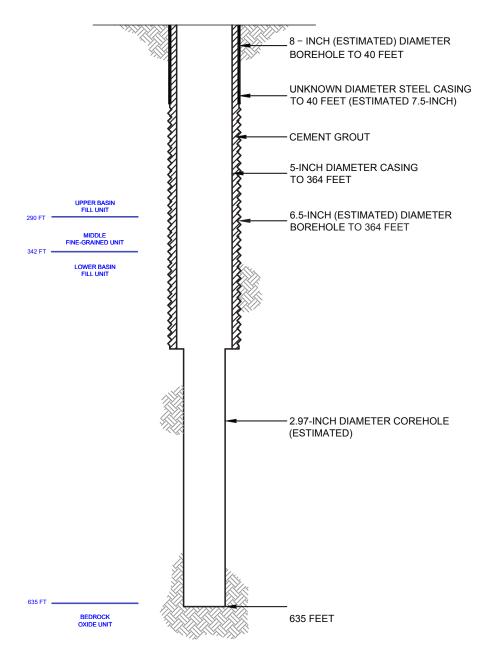
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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

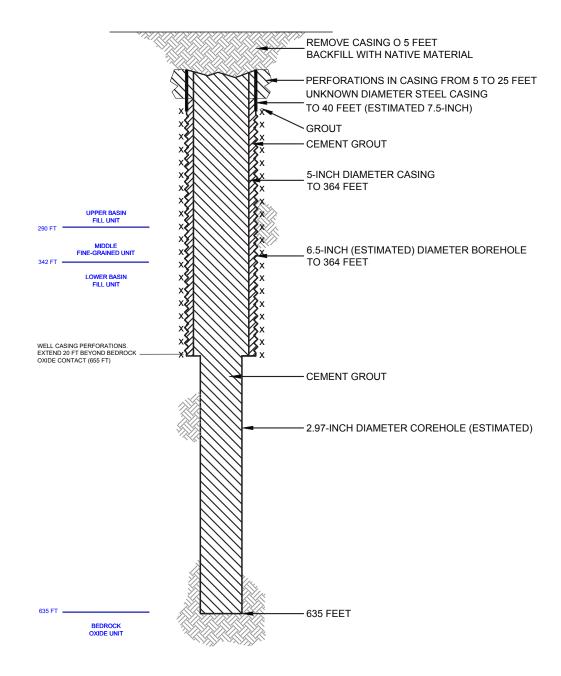
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### PROPOSED DESIGN TEST WELL DM-D



### PROPOSED PLUGGING AND ABANDONMENT TEST WELL DM-D





FLORENCE COPPER, INC.

ABANDONMENT SCHEMATIC TEST WELL DM-D



United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number	API Number	Full Well Name					
R9UIC-AZ3-FY11-1		DM-E					
State	County						
Arizona	Pinal						
Locate well in two directions from nearest lines of Surface Location  SE 1/4 of SE 1/4 of Section 28  ft. from (N/S) Line of quarter ft. from (E/W) Line of quarter ft.	Township 4S Range 9E Longitude -11						
Well Class Timing of Action (pick one)		Type of Action (pick one)					
Class I Class II Class III Class III Report After Work Date Work Ended	nce March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please type or print)	Signature	Date Signed					
Dan Johnson, VP - General Manage	7	10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

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**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

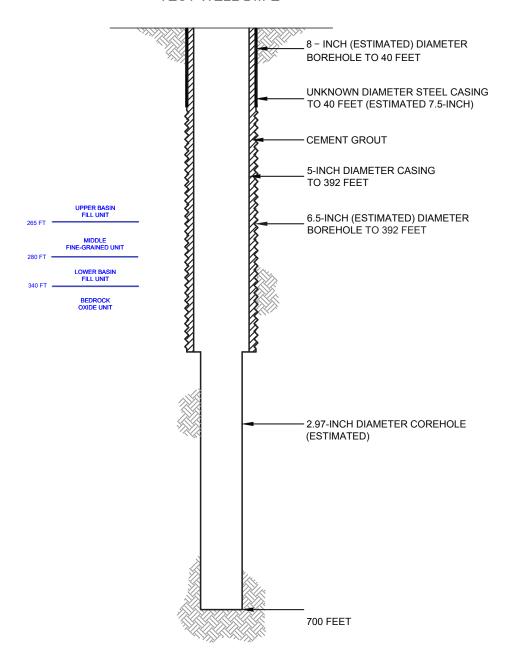
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

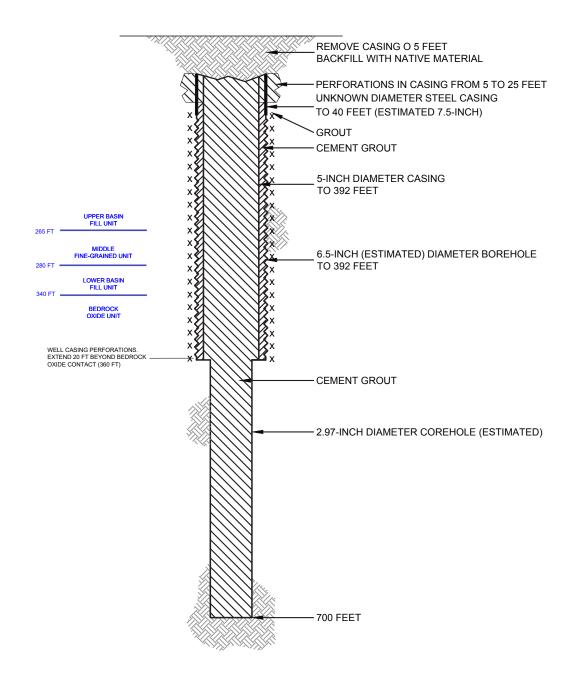
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### PROPOSED DESIGN TEST WELL DM-E



### PROPOSED PLUGGING AND ABANDONMENT TEST WELL DM-E





FLORENCE COPPER, INC.

ABANDONMENT SCHEMATIC TEST WELL DM-E



FIGURE 1

United States Environmental Protection Agency

Name and Address, Phone Number and	d/or Email of Pe	rmittee				,		
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132								
Permit or EPA ID Number		API Number				Full W	ell Name	
R9UIC-AZ3-FY11-1						M1-G		
State			1	County				
Arizona				Pinal				
Locate well in two directions from no Surface Location  NE 1/4 of NW 1/4 of Sec ft. from (N/S)		ownship $4{ m S}$		nge 9E	Latitude 33.	.043847 1.4320		
ft. from (E/W)	Line of quarte	r section.						
Well Class Timing of Action	(pick one)						Type of Action (	pick one)
Class II  ✓ Class III  Class V  Report After							d Abandonment	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official Title (Please type	or print)	Sig	nature	)				Date Signed
Dan Johnson, VP - Gener	al Manager				Dail	John Marie M		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M1-GL M1-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 278 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING



APPROXIMATELY 365 FEET

APPROXIMATELY 365 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M1-GL

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 365 FEET

APPROXIMATELY 365 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

PVC ENDCAP

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	INI ALLIDAVII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	• · · · · · · · · · · · · · · · · · · ·					
Permit or EPA ID No	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1				M2-GU			
State			County				
Arizona			Pinal				
Surface Location           NE         1/4 of NI           ft. fro	1/4 of Section 33  m (N/S) Line of quart m (E/W) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.04363387			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Rewor			
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4)	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the		
Name and Official T	itle (Please type or print)	Signature	9		Date Signed		
Dan Johnson	n, VP - General Manage	r	Dail		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M2-GU M2-GU CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 280 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 310 FT 310 FT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (407 FT) 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)



APPROXIMATELY 258 FEET

APPROXIMATELY 265 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

### ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M2-GU

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 258 FEET

APPROXIMATELY 265 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

- PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, Phone Number and/or E	mail of Perm	nittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number	A	API Number		Full W	/ell Name		
R9UIC-AZ3-FY11-1				M3-C			
State			County				
Arizona			Pinal				
		wnship $4{ m S}$ Ra	Lantude 33	3.043490 11.4218			
Well Class Timing of Action (pick	one)				Type of Action (	pick one)	
Class II Class III Class V  Notice Prior to W Date Expected to Report After Work Date Work Ended	ork Commence	March 2021			Well Rewor  ✓ Plugging a	-	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please type or pri	nt)	Signature	9			Date Signed	
Dan Johnson, VP - General M	anager		Dail	Che Che		10/3/2019	

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**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX\_COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473\_000-OBSERVATION\_WELL\_CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M3-GL M3-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 265 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 305 FT LOWER BASIN FILL UNIT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT 473 FT FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (493 FT) 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

ALDRICH

APPROXIMATELY 358.5 FEET

APPROXIMATELY 365 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M3-GL

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 358.5 FEET-

APPROXIMATELY 365 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

- PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, P	Phone Number and/or Email of P	ermittee					
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	7,						
Permit or EPA ID Nu	ımber	API Number		Full W	ell Name		
R9UIC-AZ3-FY11				M4-O			
State			County				
Arizona			Pinal				
Surface Location           NE         1/4 of	1/4 of Section 33	Township $4S$	c Latitude 33	3.043577 11.42182			
ft. from	m (E/W) Line of quart	er section.					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class II  Class III  Class IV	Notice Prior to Work  Date Expected to Commence March 2021  ✓ Plugging and Abandonment  Report After Work  Date Work Ended  Conversion to a Non-Injection Well						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatui	e			Date Signed	
	n, VP - General Manage		Dail	S		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M4-O M4-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (390 FT) 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING



APPROXIMATELY 485 FEET

APPROXIMATELY 490 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M4-O

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 485 FEET

APPROXIMATELY 490 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	INI ALLIDATII				
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project	STITING STATE OF THE STATE OF T						
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1	1-1			M5-S				
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33.	.04358295				
Surface Location								
NE 1/4 of NE	1/4 of Section 33	Township 4S Ra	nge 9E Longitude -11	11.42166				
ft. from	m (N/S) Line of quarte	er section	- 75					
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	<b>✓</b> Notice Prior to Work			Well Rewor	k			
Class II	Date Expected to Comme	nce March 2021		Diversing o	ad Abandanmant			
✓ Class III				✓ Plugging a	nd Abandonment			
Class V	Report After Work		_	Conversion	to a Non-Injection Well			
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean-out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signature	9		Date Signed			
	n, VP - General Manage	r	2 mil		10/3/2019			
			,					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

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Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M5-S M5-S CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (530 FT) 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 4-INCH NOMINAL DIAMETER SCH. 80 PVC 0.020-INCH WIDE SLOTS SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING



APPROXIMATELY 597 FEET

APPROXIMATELY 613 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M5-S

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 597 FEET

APPROXIMATELY 613 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address.	Phone Number and/or Email of P	ermittee	IND ABAILBOILINE	IN ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	• · · · · · · · · · · · · · · · · · · ·			
Permit or EPA ID No	umber	API Number		Full Well Name	
R9UIC-AZ3-FY1				M6-GU	
State			County		
Arizona			Pinal		
Surface Location   SW   1/4 of   N	M 1/4 of Section 28  m (N/S) Line of quarter (E/W) Line of quarter	Township $4\mathrm{S}$ Ra	Latitude 33	.05418567	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Rewor	
A workover rig The well casin and condition of enable placem If surface casin as needed to a feet bgs and re If the surface of from at least 2  A tremie pipe of described about If the well casin casing.  The volume of	capable of performing the required g will be inspected to determine the of any existing surface casing will a ent of cement seals.  In g is present, an attempt will be mallow an annular seal to be placed emoved.  It will be used to place Type V cement ye, will be used to force cement ground has been obstructed, as much of the placed emoved.  Type V cement, or equivalent approximations of the process of the process of the placed emoved.	d abandonment operations e depth to which the well ralso be documented. If neodade to remove it. If remove to a depth of at least 25 e perforated from at least 20 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	at the required depths will be memains open and if any obstructivessary, the well casing will be clearly of the surface casing is not feafeet bgs. In areas of agricultural the top of the MFGU; and from a bottom of the well casing to the chind perforated screen intervals placed from 100 feet below the Leating to the estimated volume of material resembles.	oved in and set up over the wons are present in the casing; eaned out to the planned cleansible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence n-out depth to and perforated be cut at least 5  ve the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p and that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	)		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M6-GU M6-GU CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE 390 FT LOWER BASIN FILL UNIT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (610 FT) 5-INCH NOMINAL DIAMETER SCH. 80 PVC 5-INCH NOMINAL DIAMETER SCH. 80 SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 583 FEET APPROXIMATELY 583 FEET PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M6-GU **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of	Permittee			
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132				
Permit or EPA ID Number	API Number		Full Well Name	
R9UIC-AZ3-FY11-1	Ari Nullibei		M7-GL	
State		County	WI/-GE	
Arizona		Pinal		
Locate well in two directions from nearest lines	of quarter section and d	rilling unit Latitude 33	.05411719	
Surface Location		Longitude _11	11 4250722	
$\overline{\mathrm{SW}}$ 1/4 of $\overline{\mathrm{NW}}$ 1/4 of Section $28$	Township 4S R	ange 9E	11.4339722	
ft. from (N/S)  Line of qua	rter section rter section.			
Well Class Timing of Action (pick one)			Tune of Action	(nick one)
			Type of Action	
Date Expected to Comm	mence March 2021		Well Rewo	rk
Class II	1VIGICII 2021		✓ Plugging a	nd Abandonment
✓ Class III Report After Work			Conversion	n to a Non-Injection Well
Class V Date Work Ended			Conversion	i to a Non-injection wen
Provide a narrative description of the work planne  A workover rig capable of performing the requir The well casing will be inspected to determine t and condition of any existing surface casing will depth to enable placement of cement seals.  If surface casing is present, an attempt will be a seneded to allow an annular seal to be place feet bgs and removed.  If the surface casing cannot be removed, it will from at least 20 feet below the base of the MFG  A tremie pipe will be used to place Type V ceme described above, will be used to force cement of If the well casing has been obstructed, as much casing.  The volume of Type V cement will be recorded will consist of Type V cement, or equivalent app	ed abandonment operation he depth to which the well also be documented. If ne made to remove it. If remove to a depth of at least 25 pe perforated from at least 10 to at least 20 feet above ent in the open well from the grout into the annulus and the cement as possible will be and will not be less than the	s at the required depths will be maremains open and if any obstruction cessary, the well casing will be clearly all of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU of the top of the MFGU; and from all the bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Left eestimated volume of material received.	oved in and set up over the wons are present in the casing; eaned out to the planned cleansible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bgs to 9 feet bgs to 9 feet well casing. Ceme, as necessary.	the presence on out  and perforated on out at least 5  eve the contact; is.  ent retainers, as
I certify under the penalty of law that I have attachments and that, based on my inquiry information is true, accurate, and complete, possibliity of fine and imprisonment. (Ref.	personally examined an of those individuals imn I am aware that there a	nediately responsible for obtain	ning the information, I beli	eve that the
Name and Official Title (Please type or print)	Signatur	е		Date Signed
Dan Johnson, VP - General Manag	er	2 mil		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M7-GL M7-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 380 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 390 FT LOWER BASIN FILL UNIT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (960 FT) 4-INCH NOMINAL DIAMETER SCH. 80 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 928 FEET APPROXIMATELY 928 FEET PVC ENDCAP 940 FT \_\_ BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER

#### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

WELL M7-GL

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	7.1.1.2 7.1.2 7.1.1.2 0.1.11.1		,	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	<i>y</i> ,					
Permit or EPA ID Nu	ımber	API Number		Full	Well Name	·
R9UIC-AZ3-FY1		Al Titaliisoi		M8-		
State			County	1.10		
Arizona			Pinal			
Surface Location SW 1/4 of NV	1/4 of Section 28	Township 4S	Latitude	3.05409 111.436		
ft. fro	m (E/W) Line of quart	er section.				
Well Class	Timing of Action (pick one)				Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021				rk nd Abandonment n to a Non-Injection Well
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet blow the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
attachments a information is	nd that, based on my inquiry o	ersonally examined those individuals I am aware that the	Certification  d and am familiar with the inform immediately responsible for obtained are significant penalties for s	aining th	e information, I beli	eve that the
Name and Official T	itle (Please type or print)	Sign	ature			Date Signed
Dan Johnson	n, VP - General Manage	r	Dais			10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M8-O M8-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 390 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 400 FT 400 FT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (970 FT) 4-INCH NOMINAL DIAMETER SCH. 80 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 1091 FEET

APPROXIMATELY 1115 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M8-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### NOTES

APPROXIMATELY 1091 FEET

APPROXIMATELY 1115 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	_111 /	HIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	el linttee				
Permit or EPA ID Nu	umber	API Number		Full W	ell Name	
R9UIC-AZ3-FY1				M9-S		
State			County	1112		
Arizona			Pinal			
	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.054184	64	
Surface Location	Y 4/4 of Ocation 00	Taurakin (a. Ba	Longitude -1	11.43621	154	
SW 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	ange 9E			
	m (N/S) Line of quartom (E/W) Line of quartom					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	✓ Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021				
✓ Class III					✓ Plugging ai	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
sides t	Date Work Ended					
A workover rig The well casin; and condition of depth to enable  If surface casing as needed to a feet bgs and refer to be a surface of from at least 20.  A tremie pipe with described about the well casing.  The volume of	capable of performing the required g will be inspected to determine the of any existing surface casing will a e placement of cement to enable page is present, an attempt will be mallow an annular seal to be placed emoved.  Type V cement, or equivalent approximately approximately a company of the place o	a bandonment operation: a depth to which the well it is to be documented. If ne placement of cement seals ade to remove it. If remove to a depth of at least 25 a perforated from at least to at least 20 feet above at in the open well from the put into the annulus and become at well as possible will be add will not be less than the	s at the required depths will be m remains open and if any obstructicessary, the well casing will be closs.  In all of the surface casing is not feat feet bgs. In areas of agricultural constant of the top of the MFGU; and from a selection between the behind perforated screen intervals are placed from 100 feet below the Lee estimated volume of material reseasons.	noved in an are properties are properties assible, it was use, the secontact to the least 25 at the secontact to the second the s	nd set up over the weresent in the casing; to the planned clear will be left in the hole surface casing will be at least 20 feet abort feet bgs to 5 feet bg well casing. Cemeissary.	ell. the presence n out  and perforated e cut at least 5  ve the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p and that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtai	ining the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
	n, VP - General Manage	r	Doil	Col		10/3/2019
				/		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

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Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

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For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M9-S M9-S CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 390 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 400 FT 400 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (990 FT) 4-INCH NOMINAL DIAMETER SCH. 80 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1570 FEET APPROXIMATELY 1570 FEET PVC ENDCAP PVC ENDCAP



APPROXIMATELY 1578 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M9-S

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### **NOTES**

APPROXIMATELY 1578 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	ME ABANBONNE	INI ALLIDATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	•			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				M10-GU	
State			County		
Arizona			Pinal		
Surface Location SW 1/4 of SE	1/4 of Section 28  m (N/S) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.04841171	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin, and condition of depth to enable  If surface casing as needed to a feet bgs and refer to be a surface of from at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a placement of cement to enable particles and the placement of cement to enable particles and the placed amoved.  Type V cement will be recorded arrype V cement ye V cement ye V cement ye V cement ye V cement ye.	depth to which the well related be depth to which the well related blacement of cement seals adde to remove it. If remove to a depth of at least 25 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be memains open and if any obstruction cessary, the well casing will be closs.  all of the surface casing is not feat feet bgs. In areas of agricultural constant of the top of the MFGU; and from a selection of the well casing to the chind perforated screen intervals placed from 100 feet below the Lestimated volume of material reseasons.	oved in and set up over the wons are present in the casing; eaned out to the planned clear asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bgs to 9 feet well casing. Ceme, as necessary.	ell. the presence n out  and perforated be cut at least 5  we the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage	r	Dail	The state of the s	10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M10-GU M10-GU CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 268 FEET APPROXIMATELY 268 FEET PVC ENDCAP UPPER BASIN FILL UNIT MIDDLE FINE-GRAINED UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M10-GU **NOTES** SEPTEMBER 2019 1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FIGURE 1

SCALE: AS SHOWN

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132						
Permit or EPA ID Number	API Number	Full Well Name				
R9UIC-AZ3-FY11-1		M11-GL				
State	County	1.000				
Arizona	Pinal					
Locate well in two directions from nearest lines of Surface Location  SW 1/4 of SE 1/4 of Section 28  ft. from (N/S) Line of quarter ft. from (E/W) Line of quarter ft.	Township $4S$ Range $9E$ Longitude $-11$	04842387 1.4279501				
Well Class Timing of Action (pick one)		Type of Action (pick one)				
Class I Class II Class III Class V  Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	March 2021	Well Rework  ✓ Plugging and Abando  Conversion to a Non-				
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean out depth to enable placement of cement to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
attachments and that, based on my inquiry of	Certification ersonally examined and am familiar with the informat f those individuals immediately responsible for obtai I am aware that there are significant penalties for sub 0 CFR § 144.32)	ning the information, I believe that th	ne e			
Name and Official Title (Please type or print)	Signature	Date Sign	ned			
Dan Johnson, VP - General Manage	r 2	10/3/	/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M11-GL M11-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE FINE-GRAINED UNIT FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN FILL UNIT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT 355 FT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (375 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

ALDRICH

APPROXIMATELY 350 FEET

APPROXIMATELY 370 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M11-GL

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### NOTES

APPROXIMATELY 350 FEET

APPROXIMATELY 370 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, Pl	none Number and/or Email of P	ermittee						
Florence Copper Pr 1575 W Hunt Hwy, Florence, AZ 85132	J							
Permit or EPA ID Nur	nber	API Number				Full W	/ell Name	·
R9UIC-AZ3-FY11		Al Titaliiboi				M12-		
State				County		1,112		
Arizona				Pinal				
Surface Location  SW 1/4 of SE	1/4 of Section 28	quarter section		illing unit	Latitude 33.	.048517 11.4277		
ft. from	(E/W) Line of quart							
Well Class	Timing of Action (pick one)						Type of Action (	pick one)
Class II	Notice Prior to Work  Date Expected to Comme	nce March 20	21				Well Rewor  ✓ Plugging a	k nd Abandonment
Class V	Report After Work  Date Work Ended						Conversion	to a Non-Injection Well
A workover rig of The well casing and condition of depth to enable  If surface casing as needed to all feet bgs and ren  If the surface ca from at least 20  A tremie pipe widescribed above of The well casing.	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean out depth to enable placement of cement to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
attachments an information is t	he penalty of law that I have p d that, based on my inquiry o rue, accurate, and complete. ne and imprisonment. (Ref. 4	those individua I am aware that	ined and als imm there a	ediately respon	sible for obtai	ning the	information, I belie	eve that the
Name and Official Tit	le (Please type or print)	s	ignatur	e				Date Signed
	, VP - General Manage		-		ک سند (	J		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M12-O M12-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET

ALDRICH

APPROXIMATELY 501 FEET

APPROXIMATELY 510 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M12-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### NOTES

APPROXIMATELY 501 FEET

APPROXIMATELY 510 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, P	hone Number and/or Email of P	ermittee	, , , , , , , , , , , , , , , , , , ,			
Florence Copper Pr 1575 W Hunt Hwy Florence, AZ 8513	,					
Permit or EPA ID Nu	mber	API Number		Full W	/ell Name	1
R9UIC-AZ3-FY11		ATTRAMES		M13-		
State			County	1,110	~	
Arizona			Pinal			
Locate well in two d  Surface Location  SW 1/4 of SE	irections from nearest lines of	quarter section and $ \label{eq:constraint} $ Township $\boxed{4s}$	Catitude 33	3.048522 11.4279		
ft. fron	Line of quart					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class II  Class III  Class IV	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021				k nd Abandonment i to a Non-Injection Well
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean out depth to enable placement of cement to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
attachments ar information is t	id that, based on my inquiry o	ersonally examined f those individuals i I am aware that the	ertification and am familiar with the informa mmediately responsible for obtai re are significant penalties for su	ining the	information, I belie	eve that the
Name and Official Ti	tle (Please type or print)	Signa	ature			Date Signed
	, VP - General Manage		Dail	S		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M13-S M13-S CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 310 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 355 FT 355 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (530 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 931 FEET APPROXIMATELY 931 FEET



APPROXIMATELY 943 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M13-S

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### **NOTES**

APPROXIMATELY 943 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132						
Permit or EPA ID Number	API Numbe	er	Full Well Name			
R9UIC-AZ3-FY11-1			M14-GL			
State		County	1111 02			
Arizona		Pinal				
Locate well in two directions from nearest	lines of quarter sec	c Latitude 33				
	of quarter section of quarter section.	S Range 9E Longitude -1	11.4370365			
Well Class Timing of Action (pick	one)		Type of Action	(pick one)		
Class I Class II Class III Class V  Notice Prior to W Date Expected to Report After Wo Date Work Ende	Commence March	2021		rk nd Abandonment n to a Non-Injection Well		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the planned clean out depth to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official Title (Please type or pri	int)	Signature		Date Signed		
Dan Johnson, VP - General M		2	Colonia de la co	10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M14-GL M14-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 295 FT 295 FT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (850 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

> HALEY ALDRICH

APPROXIMATELY 859 FEET

APPROXIMATELY 950 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M14-GL

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### NOTES

APPROXIMATELY 859 FEET

APPROXIMATELY 950 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee							
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	<b>y</b> ,								
Permit or EPA ID Nu	ımber	API Number		Full Well Name					
R9UIC-AZ3-FY1		Airitamooi		M15-GU					
State			County						
	Arizona Pinal								
Locate well in two	directions from nearest lines of	quarter section and dr	Illing unit Latitude 33.	05106082					
Surface Location			Longitude _11	1.4372098					
NW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E	11.43/2070					
	m (N/S) Line of quarte	er section							
ft. fro	m (E/W) Line of quarte	er section.							
Well Class	Timing of Action (pick one)			Type of Action	(pick one)				
Class I	Notice Prior to Work			Well Rewo	rk				
Class II	Date Expected to Comme	nce March 2021							
✓ Class III				✓ Plugging a	nd Abandonment				
Class V	Report After Work		_	Conversion	n to a Non-Injection Well				
	Date Work Ended								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the out to the planned clean out depth to enable placement of cement to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signature	9		Date Signed				
	n, VP - General Manage				10/3/2019				
Dan Johnson	i, vi Gonorai Manage		Louis	Par					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M15-GU M15-GU CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 290 FT LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (650 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 615 FEET -APPROXIMATELY 615 FEET PVC ENDCAP BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M15-GU **NOTES** SEPTEMBER 2019

FIGURE 1

SCALE: AS SHOWN

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	_11 /	HIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	el linttee				
Permit or EPA ID Nu	umber	API Number		Full W	ell Name	
R9UIC-AZ3-FY1				M16-0		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	rilling unit Latitude 33	.047351	03	
Surface Location						
SW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	Longitude -1	11.4373	562	
ft. fro	m (N/S) Line of quarto		<u>                                   </u>			
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021			Z Plugging a	nd Abandonment
✓ Class III					✓ Fluggilig at	iu Abandonnient
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The well casin; and condition of depth to enable  If surface casing as needed to a feet bgs and refer to be a surface of from at least 20.  A tremie pipe with described about the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a e placement of cement to enable plang is present, an attempt will be mallow an annular seal to be placed emoved.  Type V cement, as much capable of the will be used to place demoved as been obstructed, as much capable.	a bandonment operation: a depth to which the well it is to be documented. If ne accement of cement seals ade to remove it. If remove to a depth of at least 25 a perforated from at least to at least 20 feet above at in the open well from the out into the annulus and become at well as possible will be add will not be less than the	s at the required depths will be m remains open and if any obstructicessary, the well casing will be closs.  In all of the surface casing is not feat feet bgs. In areas of agricultural constant of the top of the MFGU; and from a selection between the behind perforated screen intervals are placed from 100 feet below the Lee estimated volume of material reseasons.	noved in an ions are pileaned out assible, it was use, the contact to it least 25 to pof the s, as neces.	nd set up over the weresent in the casing; to the planned clear will be left in the hole surface casing will be at least 20 feet abort feet bgs to 5 feet bg well casing. Cemeissary.	ell. the presence n out  and perforated e cut at least 5  we the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtai	ining the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
	n, VP - General Manage	r	Doil	Cyl.		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M16-GU M16-GU CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (710 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING



APPROXIMATELY 660 FEET

APPROXIMATELY 680 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M16-GU

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### NOTES

APPROXIMATELY 660 FEET

APPROXIMATELY 680 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	, ,			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,					
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·
R9UIC-AZ3-FY1		Airitamoo		M17-		
State			County	11117	<u> </u>	
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	3.047098	323	
Surface Location			Longitude _1	11.4368	759	
SW 1/4 of SV	1/4 of Section 28	Township 4S	Range 9E	11.4300	1137	
	m (N/S) Line of quart m (E/W) Line of quart					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
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attachments a information is	nd that, based on my inquiry o	ersonally examined a those individuals in I am aware that there	ertification and am familiar with the informa amediately responsible for obtai are significant penalties for su	ining the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signat	ure			Date Signed
Dan Johnson	n, VP - General Manage	r	Dail	S		10/3/2019

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ M17-GL PERIMETER WELL M17-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDI F MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (1100 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

ALDRICH

APPROXIMATELY 998 FEET

APPROXIMATELY 1132 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M17-GL

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

#### NOTES

APPROXIMATELY 998 FEET

APPROXIMATELY 1132 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,					
Permit or EPA ID Nu	ımber	API Number		Full V	Vell Name	1
R9UIC-AZ3-FY1		Al Titaliisoi		M18-		
State			County	1.110		
Arizona			County Pinal			
	directions from nearest lines of	quarter section an		3.04384	72	
Surface Location						_
NE 1/4 of NV	W 1/4 of Section 33	Township 4S	Range 9E	111.4320	)49	
ft. fro	m (N/S) Line of quart	er section				
Well Class	Timing of Action (pick one)				Type of Action	pick one)
Class I	✓ Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	mce March 2021			Plugging of	ad Abandanmant
✓ Class III					✓ Plugging a	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the planned clean out depth to enable placement of cement to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
attachments a information is	nd that, based on my inquiry o	ersonally examined those individuals I am aware that the	Certification  d and am familiar with the informa immediately responsible for obta ere are significant penalties for su	ining the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Sign	ature			Date Signed
Dan Johnson	n, VP - General Manage	r	David	Sel		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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APPROXIMATELY 218 FEET

APPROXIMATELY 470 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M18-GU

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 218 FEET

APPROXIMATELY 470 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, I	Phone Number and/or Email of Po		IND ADANDONINE	INI AFFIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,				
Permit or EPA ID No	umber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			M19-LBF	
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33.	.05368298	
Surface Location  SE 1/4 of N	W 1/4 of Section 28	Township $4{ m S}$ Ra	Longitude -11	1.4304606	
	m (N/S) Line of quarte				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I  Class II  ✓ Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin and condition of depth to enable  If surface casin as needed to a feet bgs and re  If the surface of from at least 2  A tremie pipe of described about  If the well casin casing.	capable of performing the required g will be inspected to determine the of any existing surface casing will a e placement of cement to enable ping is present, an attempt will be maillow an annular seal to be placed emoved.  Type V cement, will be recorded an Type V cement, or equivalent approximately approximately as the process of th	abandonment operation: a depth to which the well it lso be documented. If new lacement of cement seals ade to remove it. If remove to a depth of at least 25 aperforated from at least to at least 20 feet above to in the open well from the out into the annulus and be mement as possible will be ad will not be less than the	s at the required depths will be more mains open and if any obstruction cessary, the well casing will be closs.  all of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU of the top of the MFGU; and from at the bottom of the well casing to the ehind perforated screen intervals, placed from 100 feet below the Let estimated volume of material receives a surface of the surface and the surface of	oved in and set up over the wons are present in the casing; eaned out to the planned cleansible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bgs to 9 feet well casing. Ceme, as necessary.  BFU-bedrock contact to the tops of the well casing.	ell. the presence n out  and perforated be cut at least 5  we the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have poind that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed
Dan Johnson	n, VP - General Manage	r	2		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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## **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

OBSERVATION/PERIMETER
WELL M19-LBF

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee				
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,					
Permit or EPA ID Nu	ımber	API Number		Full W	ell Name	·
R9UIC-AZ3-FY1		Airitamboi		M20-0		
State			County	11120		
Arizona			Pinal			
Locate well in two o	directions from nearest lines of	quarter section and	drilling unit Latitude 33	3.053666	585	
Surface Location			l ammituda 1	11 4212	506	
SE 1/4 of N	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.4312	586	
	m (N/S) Line of quart					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>√</b> Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021			Diversing a	ad Abandanmant
✓ Class III					✓ Plugging a	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the planned clean out depth to enable placement of cement to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.						
attachments a information is	nd that, based on my inquiry of	ersonally examined a those individuals im I am aware that there	rtification  nd am familiar with the informat mediately responsible for obtai are significant penalties for su	ining the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signati	ure			Date Signed
Dan Johnson	n, VP - General Manage	r	Dail	S		10/3/2019

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M20-O M20-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 280 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 500 FEET

APPROXIMATELY 510 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M20-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 500 FEET

APPROXIMATELY 510 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of F	Permittee		
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132			
Permit or EPA ID Number	API Number	Full Well Name	
R9UIC-AZ3-FY11-1		M21-UBF	
State	County		
Arizona	Pinal		
Locate well in two directions from nearest lines of Surface Location  SE 1/4 of NW 1/4 of Section 28  ft. from (N/S) Line of quart ft. from (E/W) Line of quart	Township $4S$ Range $9E$ Longituder section	e 33.05354314 e -111.4304767	
Well Class Timing of Action (pick one)		Type of Action	(pick one)
Class I Class II Class III Class V  Notice Prior to Work Date Expected to Commo	March 2021	✓ Plugging	
The well casing will be inspected to determine the and condition of any existing surface casing will depth to enable placement of cement to enable.  If surface casing is present, an attempt will be mean seeded to allow an annular seal to be placed feet bgs and removed.  If the surface casing cannot be removed, it will be from at least 20 feet below the base of the MFGU.  A tremie pipe will be used to place Type V cement described above, will be used to force cement grundless.	d abandonment operations at the required depths will be depth to which the well remains open and if any ob also be documented. If necessary, the well casing will placement of cement seals.  ade to remove it. If removal of the surface casing is to a depth of at least 25 feet bgs. In areas of agricult to a depth of at least 25 feet below the bedrock-ID to at least 20 feet above the top of the MFGU; and the interest and the properties of the annulus and behind perforated screen into the annulus and behind perforated screen into the ment as possible will be placed from 100 feet below and will not be less than the estimated volume of materials.	be moved in and set up over the vertructions are present in the casing be cleaned out to the planned cle not feasible, it will be left in the hol altural use, the surface casing will about the contact to at least 20 feet about at least 25 feet bgs to 5 feet b to the top of the well casing. Cemervals, as necessary.	vell. ; the presence an out e and perforated be cut at least 5  ove the contact; gs. ent retainers, as
attachments and that, based on my inquiry o	Certification  ersonally examined and am familiar with the inf f those individuals immediately responsible for I am aware that there are significant penalties f 0 CFR § 144.32)	obtaining the information, I bel	ieve that the
Name and Official Title (Please type or print)	Signature		Date Signed
Dan Johnson, VP - General Manage	er 2	2	10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M21-UBF M21-UBF CONCRETE PAD 0 FEET 0 FEET 14-INCH MIN. STEEL SURFACE CASING, CASING REMOVED TO 5 FEET, CEMENTED BACKFILLED WITH NATVE MATERIAL 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER 6-INCH NOMINAL DIAMETER SCH. 80 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) UPPER BASIN FILL UNIT FILL UNIT MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 280 FEET APPROXIMATELY 280 FEET PVC ENDCAP 290 FT -LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER

## **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

WELL M21-UBF

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ABAILDONNIE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	• · · · · · · · · · · · · · · · · · · ·			
Permit or EPA ID No	umber	API Number		Full Well Name	
R9UIC-AZ3-FY1		,		M22-O	
State			County		
Arizona			Pinal		
Surface Location  NW 1/4 of SV  ft. fro	m (N/S) Line of quart	Township $4\mathrm{S}$ Ra	Latitude 33	.05119674	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin, and condition of out interval to describe a seeded to a feet bgs and refer to the surface of from at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required g will be inspected to determine the of any existing surface casing will a enable placement of cement seals.  In g is present, an attempt will be mallow an annular seal to be placed emoved.  It will be used to place Type V cement ye, will be used to force cement ground has been obstructed, as much of the placed of the placed will be used to force cement ground has been obstructed, as much of the placed are the placed of the placed to force cement ground has been obstructed, as much of the placed of the placed are placed or the placed are placed or the placed of t	d abandonment operations e depth to which the well ralso be documented. If neodade to remove it. If remove to a depth of at least 25 e perforated from at least 20 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m emains open and if any obstruction cessary, the well casing will be clearly all of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Learnest placed the sestimated volume of material respectively.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e planned clean and perforated be cut at least 5 ve the contact; is.  In retainers, as
attachments a information is	the penalty of law that I have p and that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage		Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M22-O M22-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 320 FT 320 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (900 FT) 4-INCH NOMINAL DIAMETER SCH. 80 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 1130 FEET

APPROXIMATELY 1150 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M22-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1130 FEET

APPROXIMATELY 1150 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, Ph	one Number and/or Email of P	ermittee	, ,			
Florence Copper Pro 1575 W Hunt Hwy, Florence, AZ 85132	ject					
Permit or EPA ID Num	ber	API Number		Full W	/ell Name	·
R9UIC-AZ3-FY11-		Airitamoo		M23-		
State			County	11120		
Arizona			Pinal			
Locate well in two dir Surface Location NW 1/4 of SW  ft. from ft. from		Township 4S	Cattude 33	3.051192 11.4372		
Well Class 1	iming of Action (pick one)				Type of Action (	pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			Well Rewor	-
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned oout to the bottom of the planned clean out interval to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet blow the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
attachments and information is tr	that, based on my inquiry o	ersonally examined a those individuals in I am aware that there	ertification and am familiar with the information mediately responsible for obtaice are significant penalties for su	ining the	information, I belie	eve that the
Name and Official Titl	e (Please type or print)	Signat	ure	~		Date Signed
Dan Johnson,	VP - General Manage	r	Dail	S		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.



FILL UNIT

MIDDLE

260 FT

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M23-UBF

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

FILL UNIT

MIDDLE FINE-GRAINED UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of Po	ermittee		-141 / 11		
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project	Tilline Co				
Permit or EPA ID Nu	umber	API Number		Full Well	Name	
R9UIC-AZ3-FY1				M24-O		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.04830472		
Surface Location						
SW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E Longitude -1	11.436835		
ft. from	m (N/S) Line of quarte	er section	- 72			
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>√</b> Notice Prior to Work				Well Rework	•
Class II	Date Expected to Comme	March 2021			/ Blugging on	d Abandonment
✓ Class III				L	Y Flugging an	u Abanuoninent
Class V	Report After Work		_		Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The well casing, and condition of out interval to If surface casing as needed to a feet bgs and re If the surface of from at least 20 A tremie pipe with described about the well casing. The volume of	capable of performing the required g will be inspected to determine the of any existing surface casing will a enable placement of cement seals ag is present, an attempt will be maillow an annular seal to be placed to emoved.  Type V cement, will be recorded an Type V cement, or equivalent approximately approx	abandonment operations depth to which the well r lso be documented. If ned de to remove it. If remova a depth of at least 25 fe perforated from at least 2 to at least 20 feet above tin the open well from the ut into the annulus and be ement as possible will be d will not be less than the	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clean of the surface casing is not feated by the surface below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Least surface between the surface cast surface and the surface cast surface and the surface cast surface and the surface cast su	oved in and sons are presseaned out to sible, it will be the the surface contact to at t least 25 fee top of the west, as necessal.	set up over the we ent in the casing; the bottom of the e left in the hole a e casing will be culeast 20 feet above the base to 5 feet base ell casing. Cementry.	the presence planned clean and perforated at at least 5 te the contact; s. tretainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm am aware that there a	ediately responsible for obtai	ning the info	ormation, I belie	ve that the
Name and Official T	itle (Please type or print)	Signature	e			Date Signed
Dan Johnson	n, VP - General Manage		Dail	Chemina Chemin	_	10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M24-O M24-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 310 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 340 FT 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (1020 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1259 FEET APPROXIMATELY 1259 FEET PVC ENDCAP



APPROXIMATELY 1282 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M24-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1282 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee			
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	у,				
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				M25-UBF	
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dri	Iling unit Latitude 33.	.04843896	
Surface Location					
SW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	Longitude -11	11.4368624	
ft. from	m (N/S) Line of quart	er section			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	√ Notice Prior to Work			Well Rewo	rk
Class II	Date Expected to Comme	mce March 2021		/ Blugging o	nd Abandonment
✓ Class III				✓ Plugging a	nd Abandonment
Class V	Report After Work			Conversion	n to a Non-Injection Well
	Date Work Ended				
A workover rig The well casing and condition of out interval to  If surface casing as needed to a feet bgs and re  If the surface of from at least 20  A tremie pipe with described above the well casing casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a enable placement of cement seals ag is present, an attempt will be maillow an annular seal to be placed to emoved.  Type V cement, will be recorded are reported to the place of the will be used to force cement group.	d abandonment operations e depth to which the well ralls of be documented. If necessary the second of a depth of at least 25 fewer perforated from at least 20 to at least 20 feet above that in the open well from the out into the annulus and becoment as possible will be and will not be less than the	at the required depths will be memains open and if any obstructivessary, the well casing will be clearly of the surface casing is not feaset bgs. In areas of agricultural us to feet below the bedrock-LBFU of the top of the MFGU; and from all the bottom of the well casing to the enhance perforated screen intervals placed from 100 feet below the Lestimated volume of material recentarials.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole te, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence e planned clean and perforated cut at least 5  we the contact; is.  nt retainers, as op of the
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature			Date Signed
					10/3/2019
Dan Johnson	n, VP - General Manage	1	2 and	ph	10/0/2010

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FILL UNIT

MIDDLE FINE-GRAINED UNIT

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M25-UBF

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

260 FT

FILL UNIT

MIDDLE FINE-GRAINED UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of Po	ermittee	IND ABANDONNIE	-INI AI		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,					
Permit or EPA ID No	umber	API Number		Full Wel	II Name	
R9UIC-AZ3-FY1				M26-O		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0545563	6	
Surface Location						_
SW 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	unge 9E Longitude -11	11.434247	79	
ft. fro	m (N/S) Line of quarte	er section	7.5			
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	mce March 2021			Diversing on	ad Abandanasas
✓ Class III					✓ Plugging an	nd Abandonment
Class V	Report After Work		_		Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The well casin; and condition o out interval to If surface casin as needed to a feet bgs and re If the surface o from at least 2  A tremie pipe v described abov  If the well casin casing.  The volume of	capable of performing the required g will be inspected to determine the of any existing surface casing will a enable placement of cement seals and is present, an attempt will be maullow an annular seal to be placed to emoved.  Type V cement, will be recorded an Type V cement, or equivalent approximately appro	abandonment operations of depth to which the well reliso be documented. If new documented it is determined to a depth of at least 25 few perforated from at least 25 few to at least 20 feet above the tin the open well from the out into the annulus and be dement as possible will be defined to which the determined the second to the definition of the determined the definition of the depth to the definition of	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clearly of the surface casing is not featiest bgs. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from all the bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Let estimated volume of material research.	noved in and ions are pre leaned out to sible, it will se, the surfact to a to least 25 feet top of the vers, as necessed.	d set up over the we sent in the casing; to the bottom of the be left in the hole a ace casing will be contact least 20 feet aboveet bgs to 5 feet bgs well casing. Cemerary.	the presence planned clean and perforated at at least 5 we the contact; s. at retainers, as
attachments a information is	the penalty of law that I have poind that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ining the ir	nformation, I belie	ve that the
Name and Official T	itle (Please type or print)	Signature	e			Date Signed
	n, VP - General Manage		Dail	Colonia de la co		10/3/2019

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M26-O M26-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 300 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (810 FT) 4-INCH NOMINAL DIAMETER SCH. 80 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET

ALDRICH

APPROXIMATELY 1038 FEET

APPROXIMATELY 1120 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M26-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1038 FEET

APPROXIMATELY 1120 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABANDONNE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject				
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			M27-LBF	
State			County		
Arizona			Pinal		
Surface Location  SW 1/4 of NV	directions from nearest lines of		Latitude 33	.05456055	
ft. fro	m (N/S) Line of quarto	er section	iige ye		
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin; and condition o out interval to If surface casin as needed to a feet bgs and re If the surface o from at least 2  A tremie pipe v described abov  If the well casin casing.  The volume of	capable of performing the required will be inspected to determine the fany existing surface casing will a enable placement of cement seals ag is present, an attempt will be mallow an annular seal to be placed to moved.  Type V cement, will be recorded arrype V cement, or equivalent approximately	a dapandonment operations a depth to which the well related be documented. If new documented it is determined to a depth of at least 25 few depth of at least 25 few depth of at least 20 feet above at in the open well from the but into the annulus and become at a possible will be defined the depth of the	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clearly of the surface casing is not fease et bgs. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from all be bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Lee estimated volume of material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e planned clean and perforated cut at least 5  ve the contact; is.  In retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage		Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M27-LBF M27-LBF CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (475 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 435 FEET APPROXIMATELY 435 FEET PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC

## **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

OBSERVATION/PERIMETER
WELL M27-LBF

SEPTEMBER 2019

SCALE: AS SHOWN FIGURE 1

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	MID ADAMBONINE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	<b>VIII</b>			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				M28-LBF	
State			County		
Arizona			Pinal		
Surface Location SW 1/4 of NV ft. fro	W 1/4 of Section 28  m (N/S) Line of quarter (E/W) Line of quarter	Township $4S$ Ra	c Lantude 33	.05470276	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work Date Expected to Comme  Report After Work Date Work Ended	March 2021		Well Rewor	
A workover rig The well casin, and condition of out interval to If surface casin as needed to a feet bgs and re If the surface of from at least 2  A tremie pipe of described about If the well casing. The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a enable placement of cement seals ag is present, an attempt will be maillow an annular seal to be placed to moved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement ye, will be used to force cement group has been obstructed, as much of the total place Type V cement, or equivalent approximately as the control of the total place.	d abandonment operation: e depth to which the well it also be documented. If ne it adde to remove it. If remove to a depth of at least 25 feet perforated from at least 1 to at least 20 feet above int in the open well from thout into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m remains open and if any obstructicessary, the well casing will be claim of the surface casing is not feater by. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a see bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Lee estimated volume of material re	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e planned clean and perforated cut at least 5  ve the contact; is.  In retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4)	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

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## **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

WELL M28-LBF

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	NID ADANDONNE	-111 /	HIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,					
Permit or EPA ID No	umber	API Number		Full We	ell Name	
R9UIC-AZ3-FY1	1-1			M29-I		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and di	rilling unit Latitude 33	.054705	21	
Surface Location						_
SW 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	ange 9E Longitude -1	11.43421	158	
ft. fro	m (N/S) Line of quarton	er section	- 122			
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021			/ Plugging or	nd Abandonment
✓ Class III					✓ Fluggilig at	iu Abandonnient
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The well casin; and condition o out interval to o  If surface casin as needed to a feet bgs and re  If the surface o from at least 20  A tremie pipe of described abov  If the well casin casing.  The volume of	capable of performing the required g will be inspected to determine the of any existing surface casing will a enable placement of cement seals. In g is present, an attempt will be maillow an annular seal to be placed to emoved.  Type V cement, will be recorded arrype V cement, or equivalent approximately approximately as much compared to the control of the control	a dapandonment operation a depth to which the well also be documented. If ne dide to remove it. If remove a depth of at least 25 fewer perforated from at least to at least 20 feet above at in the open well from the out into the annulus and become at well and will not be less than the depth of the depth	s at the required depths will be m remains open and if any obstructivessary, the well casing will be clean of the surface casing is not feater by. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a see bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Lee estimated volume of material re	noved in arrons are preaned out sible, it will be, the sur-contact to t least 25 top of the s, as necess.	and set up over the wavesent in the casing; to the bottom of the lill be left in the hole afface casing will be cast least 20 feet aborties to 5 feet bg well casing. Cemeissary.	the presence planned clean and perforated ut at least 5 ve the contact; s. ht retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	nediately responsible for obtai	ning the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signatur	·e			Date Signed
	n, VP - General Manage	r	Doil	Col		10/3/2019
				/		

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M29-UBF M29-UBF CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER UPPER BASIN FILL UNIT FILL UNIT 240 FT MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 277 FEET APPROXIMATELY 277 FEET PVC ENDCAP 290 FT -LOWER BASIN FILL UNIT LOWER BASIN FILL UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M29-UBF

## **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	Permittee				
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132					
Permit or EPA ID Number	API Number	Full Well Name			
R9UIC-AZ3-FY11-1		M30-O			
State	County				
Arizona	Pinal				
Locate well in two directions from nearest lines of Surface Location  SW 1/4 of NE 1/4 of Section 28  ft. from (N/S) Line of quart ft. from (E/W) Line of quart	Township 4S Range 9E Longitude -1	.0536632			
Well Class Timing of Action (pick one)		Type of Action (pick one)			
Class I Class II Class III Report After Work Date Work Ended	ence March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well			
A workover rig capable of performing the requirer. The well casing will be inspected to determine the and condition of any existing surface casing will a out interval to enable placement of cement seals. If surface casing is present, an attempt will be made as needed to allow an annular seal to be placed feet bgs and removed.  If the surface casing cannot be removed, it will be from at least 20 feet below the base of the MFGU.  A tremie pipe will be used to place Type V cement described above, will be used to force cement ground from the surface casing has been obstructed, as much of casing.	ade to remove it. If removal of the surface casing is not feas to a depth of at least 25 feet bgs. In areas of agricultural us experience perforated from at least 20 feet below the bedrock-LBFU of the all least 20 feet above the top of the MFGU; and from a not in the open well from the bottom of the well casing to the cout into the annulus and behind perforated screen intervals between the possible will be placed from 100 feet below the Leand will not be less than the estimated volume of material re	oved in and set up over the well. ons are present in the casing; the presence eaned out to the bottom of the planned clean sible, it will be left in the hole and perforated be, the surface casing will be cut at least 5 contact to at least 20 feet above the contact; t least 25 feet bgs to 5 feet bgs.  top of the well casing. Cement retainers, as , as necessary.  LBFU-bedrock contact to the top of the			
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official Title (Please type or print)	Signature	Date Signed			
Dan Johnson, VP - General Manage		10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M30-O M30-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN APPROXIMATELY APPROXIMATELY 290 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN FILL UNIT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (595 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 555 FEET APPROXIMATELY 555 FEET PVC ENDCAP 575 FT \_\_ BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M<sub>30</sub>-O **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	Cimina			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				M31-LBF	
State			County		
Arizona			Pinal		
Surface Location           SW         1/4 of NI           ft. fro	1/4 of Section 28  m (N/S) Line of quart	Township $4S$ Ra	c Lantude 33	.05353792	
Well Class	Timing of Action (pick one)			Type of Action	(nick one)
Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Rewor	
A workover rig The well casin, and condition of out interval to If surface casin as needed to a feet bgs and re If the surface of from at least 2  A tremie pipe of described about If the well casing. The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a enable placement of cement seals ag is present, an attempt will be maillow an annular seal to be placed to moved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement ye, will be used to force cement group has been obstructed, as much of the main to the place of th	d abandonment operation: e depth to which the well it also be documented. If ne it adde to remove it. If remove to a depth of at least 25 feet perforated from at least 1 to at least 20 feet above int in the open well from thout into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m remains open and if any obstructicessary, the well casing will be claim of the surface casing is not feater by. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a see bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Lee estimated volume of material re	oved in and set up over the wons are present in the casing; eaned oout to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bgs to 9 feet well casing. Ceme, as necessary.	the presence are planned clean and perforated cut at least 5 are the contact; is.  In tretainers, as a pop of the
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL M31-LBF M31-LBF CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 280 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (345 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 320 FEET APPROXIMATELY 320 FEET PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M31-LBF

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

**NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee				
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,					
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·
R9UIC-AZ3-FY1		ATTRAMISON		M32-1		
State			County	11102		
Arizona			Pinal			
Locate well in two o	lirections from nearest lines of	quarter section and o	Irilling unit Latitude 33	3.050995	515	
Surface Location			l amatemata de		-04	
NE 1/4 of SE	1/4 of Section 28	Township 4S F	Longitude -1	11.4223	581	
	m (N/S) Line of quart					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>√</b> Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021			Diversion of	ad Abandanmant
✓ Class III					✓ Plugging a	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the planned clean out interval to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatu	re			Date Signed
Dan Johnson	n, VP - General Manage	r	Dail	Sel		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

HALEY ALDRICH

APPROXIMATELY 170 FEET

UPPER BASIN FILL UNIT

MIDDLE FINE-GRAINED UNIT

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M32-UBF

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 170 FEET

UPPER BASIN FILL UNIT

MIDDLE FINE-GRAINED UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email o	Permittee				
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132					
Permit or EPA ID Number	API Number	Full Well Name			
R9UIC-AZ3-FY11-1		M33-UBF			
State	County				
Arizona	Pinal				
	. c	ititude 33.05392427  gitude -111.418469			
Well Class Timing of Action (pick one)		Type of Action	(pick one)		
Class I Class II Class III Report After Work Date Work Ended	mence March 2021		rk and Abandonment n to a Non-Injection Well		
The well casing will be inspected to determine and condition of any existing surface casing we clean out interval to enable placement of cem.  If surface casing is present, an attempt will be as needed to allow an annular seal to be placed feet bgs and removed.  If the surface casing cannot be removed, it will from at least 20 feet below the base of the MF.  A tremie pipe will be used to place Type V cerd described above, will be used to force cement.  If the well casing has been obstructed, as much casing.	red abandonment operations at the required depth the depth to which the well remains open and if an il also be documented. If necessary, the well casin ent seals.  made to remove it. If removal of the surface casined to a depth of at least 25 feet bgs. In areas of a be perforated from at least 20 feet below the bedrague to at least 20 feet above the top of the MFGU; a tent in the open well from the bottom of the well calculated in the annulus and behind perforated screet in cement as possible will be placed from 100 feet the and will not be less than the estimated volume of an and will not be less than the estimated volume of the series.	s will be moved in and set up over the way obstructions are present in the casing g will be cleaned out tout to the bottom.  g is not feasible, it will be left in the hole agricultural use, the surface casing will leach. LBFU contact to at least 20 feet abound from at least 25 feet bgs to 5 feet by sing to the top of the well casing. Cement intervals, as necessary.	rell. ; the presence of the planned e and perforated be cut at least 5  ove the contact; gs. ent retainers, as		
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official Title (Please type or print)	Signature		Date Signed		
Dan Johnson, VP - General Mana	ger 2	Dail	10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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MIDLE FINE-GRAINED UNIT 180 FT MIDDLE FINE-GRAINED UNIT

STAINLESS STEEL CASING

PVC ENDCAP

CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 170 FEET

UPPER BASIN

FILL UNIT

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL M33-UBF

STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 170 FEET

FILL UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	-111 /	IIIDATII	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	roject					
Permit or EPA ID Nu	ımber	API Number		Full We	ell Name	
R9UIC-AZ3-FY1	1-1			O3-GI		
State			County			
Arizona			Pinal			
Surface Location  SE 1/4 of SV  ft. from	Ilirections from nearest lines of  V 1/4 of Section 28  m (N/S) Line of quarte m (E/W) Line of quarte	Township $4{ m S}$ Ra	Lautude 3.	3.048359		
Well Class	Timing of Action (pick one)				Type of Action (	nick one)
Class II  Class III  Class V	Notice Prior to Work Date Expected to Comme  Report After Work Date Work Ended	nce March 2021			Well Rewor  ✓ Plugging ar	
A workover rig The well casing, and condition of out interval to If surface casing as needed to a feet bgs and re If the surface of from at least 20 A tremie pipe with described about the well casing. The volume of	capable of performing the required will be inspected to determine the fany existing surface casing will a enable placement of cement seals ag is present, an attempt will be mallow an annular seal to be placed to enoved.  Type V cement, will be recorded arrype V cement, or equivalent approximately approximately as the content of the process of the pr	abandonment operations of depth to which the well reliso be documented. If new determined to a depth of at least 25 few perforated from at least 25 few to at least 20 feet above the tin the open well from the out into the annulus and because the depth of the depth	s at the required depths will be m remains open and if any obstructicessary, the well casing will be claim of the surface casing is not feated by the surface casing is not feated by. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Let estimated volume of material respectives.	sible, it will se, the surf- contact to the least 25 fets, as necess	ad set up over the we esent in the casing; to the bottom of the left in the hole a face casing will be cast least 20 feet above feet bgs to 5 feet bgs well casing. Cemer sary.	ell. the presence planned clean and perforated ut at least 5 we the contact; s. at retainers, as
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatur	e	_		Date Signed
	n, VP - General Manage		Dail	God -		10/3/2019

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ PERIMETER WELL 03-GL O3-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 290 FT 290 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (400 FT) 5-INCH NOMINAL DIAMETER SCH. 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)



APPROXIMATELY 385 FEET

APPROXIMATELY 395 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 03-GL

STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 385 FEET

APPROXIMATELY 395 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	MID ADANDONNE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject				
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				O5.1-O	
State			County		
Arizona			Pinal		
Surface Location SW 1/4 of SE	1/4 of Section 28  m (N/S) Line of quart m (E/W) Line of quart	Township $4_{\rm S}$ Ra	c Lantude 33	.04632672 11.4284512	
Well Class	Timing of Action (pick one)			Type of Action	(nick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Rewo	
A workover rig The well casin, and condition of out interval to If surface casin as needed to a feet bgs and re If the surface of from at least 2  A tremie pipe of described about If the well casing. The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a enable placement of cement seals ig is present, an attempt will be mallow an annular seal to be placed to emoved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement, will be used to force cement group and the properties of the manular seal to be placed to place the movel.  Type V cement will be recorded at Type V cement, or equivalent approximations.	d abandonment operation: e depth to which the well relates be documented. If new adde to remove it. If remove to a depth of at least 25 few appropriate from at least 20 feet above at in the open well from the count into the annulus and becoment as possible will be and will not be less than the	s at the required depths will be m remains open and if any obstructicessary, the well casing will be claim of the surface casing is not feater by. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a see bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Lee estimated volume of material re	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bgs to 9 feet well casing. Ceme, as necessary.	the presence e planned clean and perforated cut at least 5  ve the contact; is.  In retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4)	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed
	n, VP - General Manage		Dail		10/3/2019

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 05.1-0 PERIMETER WELL 05.1-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 245 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 295 FT 295 FT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (380 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 853 FEET

APPROXIMATELY 880 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 05.1-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 853 FEET

APPROXIMATELY 880 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address, I	Phone Number and/or Email of P	ermittee	MID ADAMDONME		HIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	el lintee				
Permit or EPA ID No	ımber	API Number		Full We	ell Name	
R9UIC-AZ3-FY1				05.2-0		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and di	rilling unit Latitude 33	.046308	99	
Surface Location						
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	ange 9E Longitude -1	11.42869	964	
ft. fro	m (N/S) Line of quarto					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>√</b> Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	mce March 2021			/ Plugging a	nd Abandonment
✓ Class III					✓ Fluggilig at	iu Abandonnient
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The well casin, and condition o out interval to If surface casin as needed to a feet bgs and re If the surface o from at least 2  A tremie pipe of described about If the well casin casing. The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a enable placement of cement seals ag is present, an attempt will be maillow an annular seal to be placed to emoved.  Type V cement, will be recorded arrype V cement, or equivalent approximately approximately as the content of the process of the Medical Content of the content of the process of the Medical Content of the content of the process of the Medical Content of the Proces	abandonment operation depth to which the well lso be documented. If ne de to remove it. If remove o a depth of at least 25 fe perforated from at least to at least 20 feet above t in the open well from the out into the annulus and be mement as possible will be defined by the service of the s	s at the required depths will be m remains open and if any obstructivessary, the well casing will be clean of the surface casing is not featened by the surface below the bedrock-LBFU of the top of the MFGU; and from a surface bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Lee estimated volume of material re	noved in arrions are prileaned out sible, it will se, the sur contact to it least 25 to top of the s, as necess.	and set up over the waresent in the casing; to the bottom of the lill be left in the hole afface casing will be cast least 20 feet aborties to 5 feet bg well casing. Cemeissary.	ell. the presence planned clean and perforated ut at least 5 we the contact; s.  ht retainers, as
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatur	е			Date Signed
				()		10/3/2019
Dan Johnsoi	n, VP - General Manage		2 mil	Total		10/0/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 05.2-0 PERIMETER WELL 05.2-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 290 FT 290 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (400 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING



APPROXIMATELY 792 FEET

APPROXIMATELY 880 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 05.2-0

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 792 FEET

APPROXIMATELY 880 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

PVC ENDCAP

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	NIB ABANBONNE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	• · · · · · · · · · · · · · · · · · · ·			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				O8-GU	
State			County		
Arizona			Pinal		
Surface Location  NW 1/4 of SE	1/4 of Section 28  In (N/S) Line of quarter (E/W) Line of quarter	Township $4{ m S}$ Ra	Latitude 33	.05205935	
Well Class	Timing of Action (pick one)			Type of Action	(nick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Reword	
A workover rig The well casin, and condition of out interval to describe a seeded to a feet bgs and refer to get a seeded to a feet bgs and refer to get a seeded to a feet bgs and refer to get a seeded to a feet bgs and refer to get a seeded to a feet bgs and refer to get a seeded to g	capable of performing the required will be inspected to determine the fany existing surface casing will a enable placement of cement seals. If you was annular seal to be placed to moved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement ye, will be used to force cement group that the place of the will be used to force cement group that be used to force cement group that the place of the will be used to force cement group that the place of the place of the will be used to force cement group that the place of the pl	d abandonment operations e depth to which the well ralso be documented. If new ade to remove it. If remove to a depth of at least 25 few perforated from at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m remains open and if any obstruction cessary, the well casing will be clearly of the surface casing is not feater by the surface casing is not feater by. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a see bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Les estimated volume of material respectively.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e planned clean and perforated cut at least 5  ve the contact; is.  In retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
Dan Johnson	n, VP - General Manage	r	Dail		10/3/2019

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MIDDLE

**FINE-GRAINED UNIT** 

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 08-GU

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

FINE-GRAINED UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	MID ABANDONNIE	IN ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject				
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				O8-O	
State			County		
Arizona			Pinal		
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Class II  Class III  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Reword	
A workover rig The well casin; and condition of out interval to If surface casin as needed to a feet bgs and re If the surface of from at least 20 A tremie pipe w described abov If the well casin casing. The volume of	capable of performing the required will be inspected to determine the fany existing surface casing will a enable placement of cement seals ing is present, an attempt will be maillow an annular seal to be placed to emoved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement ye, will be used to force cement group has been obstructed, as much company to the provided in the p	d abandonment operations e depth to which the well ralso be documented. If new adde to remove it. If remova to a depth of at least 25 few a perforated from at least 20 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m emains open and if any obstruction cessary, the well casing will be clean of the surface casing is not feated by the surface below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the enind perforated screen intervals placed from 100 feet below the Least surface below the Least surface cast material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e planned clean and perforated cut at least 5  ve the contact; is.  In retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 40	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature			Date Signed
	n, VP - General Manage		Dail		10/3/2019

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 08-0 PERIMETER WELL 08-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 310 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 320 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 599.5 FEET PVC ENDCAP APPROXIMATELY 599.5 FEET



APPROXIMATELY 610 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 08-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 610 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee				
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132					
Permit or EPA ID Number	API Number	Full Well Name			
R9UIC-AZ3-FY11-1		O12-GL			
State	County	100 00			
Arizona	Pinal				
Locate well in two directions from nearest lines of Surface Location  SE 1/4 of SW 1/4 of Section 28  ft. from (N/S) Line of quarter ft. from (E/W) Line of quarter	Township 4S Range 9E Longitude -1	.04642919			
Well Class Timing of Action (pick one)		Type of Action (pick one)			
Class I Class II Class III Report After Work Date Work Ended	nce March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well			
A workover rig capable of performing the required. The well casing will be inspected to determine the and condition of any existing surface casing will a out interval to enable placement of cement seals If surface casing is present, an attempt will be made as needed to allow an annular seal to be placed the feet bgs and removed.  If the surface casing cannot be removed, it will be from at least 20 feet below the base of the MFGU.  A tremie pipe will be used to place Type V cement described above, will be used to force cement ground if the well casing has been obstructed, as much of casing.	ade to remove it. If removal of the surface casing is not fear o a depth of at least 25 feet bgs. In areas of agricultural us e perforated from at least 20 feet below the bedrock-LBFU to at least 20 feet above the top of the MFGU; and from a at in the open well from the bottom of the well casing to the bout into the annulus and behind perforated screen intervals rement as possible will be placed from 100 feet below the L	oved in and set up over the well. ons are present in the casing; the presence eaned out to the bottom of the planned clean sible, it will be left in the hole and perforated se, the surface casing will be cut at least 5  contact to at least 20 feet above the contact; t least 25 feet bgs to 5 feet bgs.  top of the well casing. Cement retainers, as is, as necessary.  LBFU-bedrock contact to the top of the			
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official Title (Please type or print)	Signature	Date Signed			
Dan Johnson, VP - General Manage	7	10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

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APPROXIMATELY 385 FEET

APPROXIMATELY 395 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 012-GL

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 385 FEET

APPROXIMATELY 395 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	MID ABANDONNIE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	• · · · · · · · · · · · · · · · · · · ·			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1		,		O12-O	
State			County		
Arizona			Pinal		
Surface Location  SE 1/4 of SV  ft. fro	y 1/4 of Section 28  m (N/S) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.04644518	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class III  Class V	Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	March 2021		Well Reword	
A workover rig The well casin, and condition of out interval to If surface casin as needed to a feet bgs and re If the surface of from at least 2  A tremie pipe of described about If the well casing. The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a enable placement of cement seals ing is present, an attempt will be mallow an annular seal to be placed to emoved.  Type V cement will be recorded at Type V cement, or equivalent approximately approximately as the content of the placed to the content of the placed to place the placed to placed the placed to place the placed to placed the placed the placed to placed the plac	d abandonment operations e depth to which the well ralso be documented. If new adde to remove it. If remova to a depth of at least 25 few a perforated from at least 20 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m emains open and if any obstruction cessary, the well casing will be clean of the surface casing is not feated by the surface below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the enind perforated screen intervals placed from 100 feet below the Least surface below the Least surface cast material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole are, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence planned clean and perforated ut at least 5 ve the contact; s.
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ïne and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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APPROXIMATELY 970 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 012-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 970 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee			
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	7,				
Permit or EPA ID Nu	ımher	API Number		Full Well Name	
R9UIC-AZ3-FY1		Arrivallibei		013-0	
State	1-1		Country	015-0	
Arizona			Pinal Pinal		
Locate well in two	directions from nearest lines of	quarter section and di	illing unit Latitude 33	.05234918	
Surface Location			Longitude _1	11 4240402	
NW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	ange 9E	11.4349492	
	m (N/S) Line of quart				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	✓ Notice Prior to Work			Well Rewo	
Class II	Date Expected to Comme	ence March 2021		well Kewo	in.
✓ Class III				✓ Plugging a	nd Abandonment
Class V	Report After Work			Conversion	n to a Non-Injection Well
Class V	Date Work Ended				•
A workover rig The well casing and condition of out interval to e  If surface casing as needed to a feet bgs and re  If the surface of from at least 20  A tremie pipe with described above the well casing casing.  The volume of	capable of performing the required gwill be inspected to determine the fany existing surface casing will a enable placement of cement seals ing is present, an attempt will be mallow an annular seal to be placed in the placed of the placed of the placed of the placed will be used to place Type V cement will be used to force cement graph as been obstructed, as much of the placed	d abandonment operation e depth to which the well also be documented. If ne ade to remove it. If remove to a depth of at least 25 fe e perforated from at least 1 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be m remains open and if any obstructicessary, the well casing will be claim of the surface casing is not feater bgs. In areas of agricultural us 20 feet below the bedrock-LBFU the top of the MFGU; and from a se bottom of the well casing to the behind perforated screen intervals a placed from 100 feet below the Lee estimated volume of material re	oved in and set up over the wons are present in the casing; eaned out to the bottom of the sible, it will be left in the hole e, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e planned clean and perforated cut at least 5 ever the contact; is.
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtai	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	е		Date Signed
Dan Johnson	n, VP - General Manage	r	Doil	The state of the s	10/3/2019

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 013-0 PERIMETER WELL 013-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (670 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1413 FEET PVC ENDCAP APPROXIMATELY 1413 FEET



APPROXIMATELY 1440 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 013-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1440 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	NIB ABANDONNE	INI ALLIDATII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	Cimina				
Permit or EPA ID No	ımber	API Number		Full Well Name		
R9UIC-AZ3-FY1				O15-O		
State			County			
Arizona			Pinal			
Surface Location SW 1/4 of SV	y 1/4 of Section 28  m (N/S) Line of quart m (E/W) Line of quart	Township $4S$ Ra	c Latitude 33	.04819175		
Well Class	Timing of Action (pick one)			Type of Action	(pick one)	
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Reword		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the planned clean out interval to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatur	re		Date Signed	
	n, VP - General Manage	r	Dail	John	10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 015-0 PERIMETER WELL 015-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 325 FT 325 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (570 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1315 FEET - PVC ENDCAP APPROXIMATELY 1315 FEET



APPROXIMATELY 1330 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 015-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1330 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE		7/11		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	STIMES STATE OF THE STATE OF TH					
Permit or EPA ID Nu	umber	API Number		Full Well Nam	e		
R9UIC-AZ3-FY1				O19-GL			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.05363133			
Surface Location						_	
SE 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.4328698			
ft. fro	m (N/S) Line of quarte	er section	- 72				
Well Class	Timing of Action (pick one)			Туре	of Action (p	ick one)	
Class I	<b>√</b> Notice Prior to Work				Well Rework		
Class II	Date Expected to Comme	mce March 2021			Diversing one	l Abandanmant	
✓ Class III				<b>V</b>	Flugging and	I Abandonment	
Class V	Report After Work		_		Conversion t	o a Non-Injection Well	
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the planned clean out interval to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	e			Date Signed	
	n, VP - General Manage	r	2 ail	John		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 019-GL PERIMETER WELL 019-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 290 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (480 FT) 5-INCH NOMINAL DIAMETER SCH. 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 455 FEET - PVC ENDCAP APPROXIMATELY 455 FEET BEDROCK OXIDE UNIT OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 019-GL **NOTES** SEPTEMBER 2019 1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS. FIGURE 1

SCALE: AS SHOWN

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	ME ABANBONNE	IN ALLIBATII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	••••••••••••••••••••••••••••••••••••••				
Permit or EPA ID No	ımber	API Number		Full Well Name		
R9UIC-AZ3-FY1				O19-O		
State			County			
Arizona			Pinal			
Surface Location  SE 1/4 of N	W 1/4 of Section 28  m (N/S) Line of quart m (E/W) Line of quart	Township $4{ m S}$ Ra	Lantude 33	.05360528		
Well Class	Timing of Action (pick one)			Type of Action	(nick one)	
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Reword		
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Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signature	e		Date Signed	
	n, VP - General Manage		Dail		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 019-0 PERIMETER WELL 019-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (420 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 627 FEET - PVC ENDCAP APPROXIMATELY 627 FEET



APPROXIMATELY 630 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 019-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 630 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132						
Permit or EPA ID Number	API Number	Full Well Name				
R9UIC-AZ3-FY11-1		O28.1-O				
State	County					
Arizona	Pinal					
Locate well in two directions from nearest lines of Surface Location  SE 1/4 of SE 1/4 of Section 28  ft. from (N/S) Line of quarter ft. from (E/W) Line of quarter ft.	Township 4S Range 9E Longitude -11	.04890302 11.4237763				
Well Class Timing of Action (pick one)		Type of Action (pick one)				
Class I Class II Class III Class III Report After Work Date Work Ended	nce March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well				
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official Title (Please type or print)	Signature	Date Signed				
Dan Johnson, VP - General Manage	r 2	10/3/2019				

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 028.1-0 PERIMETER WELL 028.1-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT 280 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 514 FEET

APPROXIMATELY 530 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 028.1-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 514 FEET

APPROXIMATELY 530 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	.NI AIIID <i>E</i>	<b>V</b>		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	el linttee					
Permit or EPA ID No	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1	1-1			O28.2-S			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.04881686			
Surface Location							
SE 1/4 of SE	1/4 of Section 28	Township 4S Ra	Longitude -1	11.4234635			
ft. fro	m (N/S) Line of quarte	er section	- 72				
Well Class	Timing of Action (pick one)			Type of	f Action (pick one)		
Class I	<b>✓</b> Notice Prior to Work			We	ell Rework		
Class II	Date Expected to Comme	nce March 2021		DI DI	ing and Abandanmant		
✓ Class III				V Più	ugging and Abandonment		
Class V	Report After Work			Co	nversion to a Non-Injection Well		
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed		
				1	10/3/2019		
Dan Johnson	n, VP - General Manage		2 mil	Post	10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ O28.2-S PERIMETER WELL 028.2-S CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT 280 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (360 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 495 FEET

APPROXIMATELY 510 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 028.2-S

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 495 FEET

APPROXIMATELY 510 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	-1111	HIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	el linitee					
Permit or EPA ID Nu	ımber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1				O28-G			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.048740	82		
Surface Location						_	
SE 1/4 of SE	1/4 of Section 28	Township 4S Ra	Longitude -1	11.42397	77		
ft. fro	m (N/S) Line of quarte	er section	-  22				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	nce March 2021			Plugging a	nd Abandonment	
✓ Class III					✓ Fluggilig at	iu Abandonnient	
Class V	Report After Work				Conversion	to a Non-Injection Well	
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	e	_		Date Signed	
				()		10/3/2019	
Dan Johnson	n, VP - General Manage		2 mil	Total		10/0/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

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For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 028-GL PERIMETER WELL 028-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) -20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT 280 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (340 FT) IF APPLICABLE 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 307 FEET PVC ENDCAP APPROXIMATELY 307 FEET 320 FT -BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 028-GL **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	AND ADANDONNE	-1111 /	HIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	oniii.co					
Permit or EPA ID No	umber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1				O39-O			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and d	Irilling unit Latitude 33	3.044993	19		
Surface Location						_	
NE 1/4 of NV	W 1/4 of Section 33	Township 4S R	lange 9E Longitude -1	11.43009	958		
ft. fro	m (N/S) Line of quarton	er section	- 73				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	nce March 2021			Diversing a	ad Abandanmant	
✓ Class III					✓ Plugging al	nd Abandonment	
Class V	Report After Work				Conversion	to a Non-Injection Well	
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatu	re			Date Signed	
	n, VP - General Manage		Dail	()		10/3/2019	

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ O39-O PERIMETER WELL 039-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 290 FT LOWER BASIN LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (420 FT) 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH SLOTS WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 910 FEET - PVC ENDCAP APPROXIMATELY 910 FEET



APPROXIMATELY 916 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 039-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 916 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONING	INI AI I IDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	•				
Permit or EPA ID No	ımber	API Number		Full Well Name		
R9UIC-AZ3-FY1				O49-GL		
State			County			
Arizona			Pinal			
Surface Location NW 1/4 of NV ft. fro	W 1/4 of Section 33  m (N/S) Line of quart m (E/W) Line of quart	Township $4\mathrm{S}$ Ra	Latitude 33	.0449406		
Well Class	Timing of Action (pick one)			Type of Action	(pick one)	
Class II  Class III  Class III  Class V	Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	March 2021		Well Rewo		
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required will be inspected to determine the fany existing surface casing will a pration to enable placement of cerning is present, an attempt will be mallow an annular seal to be placed emoved.  Type V cement, or equivalent approximately appr	d abandonment operations a depth to which the well r also be documented. If necessarial is a depth of at least 25 are perforated from at least 25 are perforated from at least 20 to at least 20 feet above and in the open well from the put into the annulus and becoment as possible will be and will not be less than the	s at the required depths will be memains open and if any obstructivessary, the well casing will be clearly of the surface casing is not feafeet bgs. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from a bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Let estimated volume of material re	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bgs to 9 feet well casing. Cemes, as necessary.	the presence e deepest e and perforated de cut at least 5 eve the contact; is.  In tretainers, as	
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Name and Official T	itle (Please type or print)	Signature	)		Date Signed	
	n, VP - General Manage	r	Dail	John	10/3/2019	

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 049-GL PERIMETER WELL 049-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) -20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 300 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 330 FT LOWER BASIN LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (760 FT) IF APPLICABLE 5-INCH NOMINAL DIAMETER SCH. 80 5-INCH NOMINAL DIAMETER SCH. PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH SLOTS WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 730 FEET - PVC ENDCAP APPROXIMATELY 730 FEET BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 049-GL **NOTES** SEPTEMBER 2019 1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS. FIGURE 1

SCALE: AS SHOWN

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,							
Permit or EPA ID Nu	ımber	API Number			Full W	/ell Name	·	
R9UIC-AZ3-FY1		Al Titaliisoi			049-0			
State			County		0 .,			
Arizona			County Pinal					
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.04494394								
Surface Location								
NW 1/4 of NV	V 1/4 of Section 33	Township 4S	Range 9E	ide _11	11.4352	552		
	m (N/S) Line of quart							
Well Class	Timing of Action (pick one)					Type of Action (	pick one)	
Class I	<b>√</b> Notice Prior to Work					Well Rewor	k	
Class II	Date Expected to Comme	nce March 202				Diversion of	ad Abandanmant	
✓ Class III						✓ Plugging a	nd Abandonment	
Class V	Report After Work					Conversion	to a Non-Injection Well	
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet bloow the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Sig	nature				Date Signed	
Dan Johnson	n, VP - General Manage	r	2	استا(	John Marie M		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ 049-0 PERIMETER WELL 049-0 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 300 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 320 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (830 FT) 4-INCH NOMINAL DIAMETER SCH. 4-INCH NOMINAL DIAMETER 80 PVC SCREEN, 0.020-INCH WIDE SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1247 FEET - PVC ENDCAP APPROXIMATELY 1247 FEET



APPROXIMATELY 1280 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL 049-0

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1280 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	ν,							
Permit or EPA ID Nu	ımber	API Number		Full Well Name				
R9UIC-AZ3-FY1	1-1			OB-1				
State			County					
Arizona Pinal								
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.04882831								
Surface Location			Longitude _11	11./315015				
SE 1/4 of SV	V 1/4 of Section 28	Township 4S R	ange 9E	11.4313013				
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.								
Well Class	Timing of Action (pick one)			Type of Action	(pick one)			
Class I	<b>V</b> Notice Prior to Work			Well Rewo	rk			
Class II	Date Expected to Commo	ence March 2021						
✓ Class III				✓ Plugging a	ind Abandonment			
Class V	Report After Work			Conversio	n to a Non-Injection Well			
Glass v	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed			
	n, VP - General Manage		2	John State of the	10/3/2019			

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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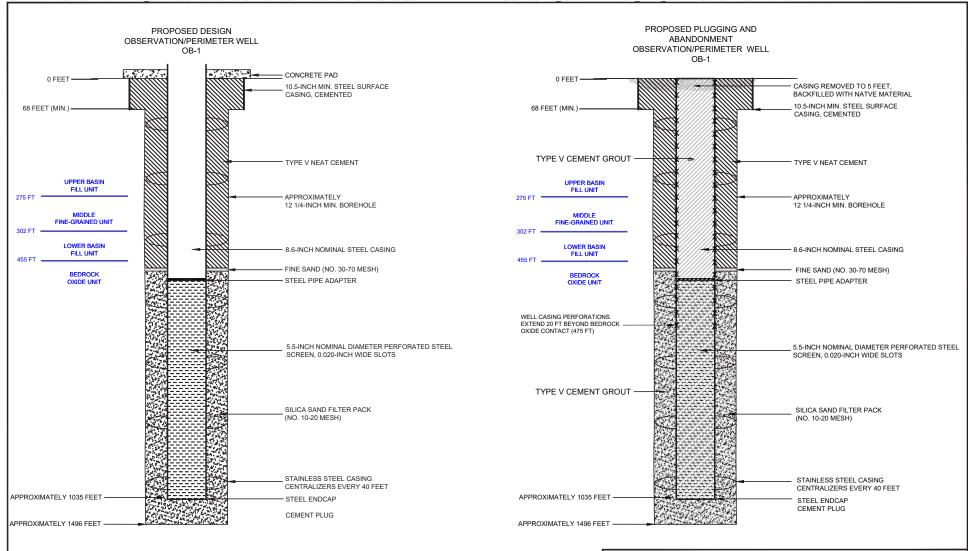
For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC
OBSERVATION/PERIMETER WELL
OB-1 (OW-1, OBS-1, OB-1 CONOCO)

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132						
Permit or EPA ID Number	API Number	Full Well Name				
R9UIC-AZ3-FY11-1		OB1-1				
State	County					
Arizona	Pinal					
Locate well in two directions from nearest lines of Surface Location  NE 1/4 of SW 1/4 of Section 28  ft. from (N/S) Line of quarter the ft. from (E/W) Line of quarter the ft. from (E/W)	Township 4S Range 9E Longitude -11	05106588 1.4311982				
Well Class Timing of Action (pick one)		Type of Action (pick one)				
Class I  Class II  Class III  Class V  Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well				
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official Title (Please type or print)	Signature	Date Signed				
Dan Johnson, VP - General Manage	r 2	10/3/2019				

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ **ABANDONMENT** PERIMETER WELL OB1-1 OBSERVATION/PERIMETER WELL OB1-1 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE 360 FT 360 FT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (780 FT) IF APPLICABLE 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 740 FEET APPROXIMATELY 740 FEET - PVC ENDCAP 760 FT BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** OB1-1 **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	у,							
Permit or EPA ID Nu	ımber	API Number		Full	Well Name	1		
R9UIC-AZ3-FY1		Al Titalingoi		OB-				
State			County	0.5				
Arizona			County Pinal					
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.04974225								
Surface Location								
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude1	111.430	3771			
	m (N/S) Line of quart							
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	✓ Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	nce March 2021			A Diversion of	ad Abamdanmant		
✓ Class III					✓ Plugging a	nd Abandonment		
Class V	Report After Work				Conversion	to a Non-Injection Well		
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signa	ature			Date Signed		
Dan Johnson	n, VP - General Manage	r	Dail	Call Services		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

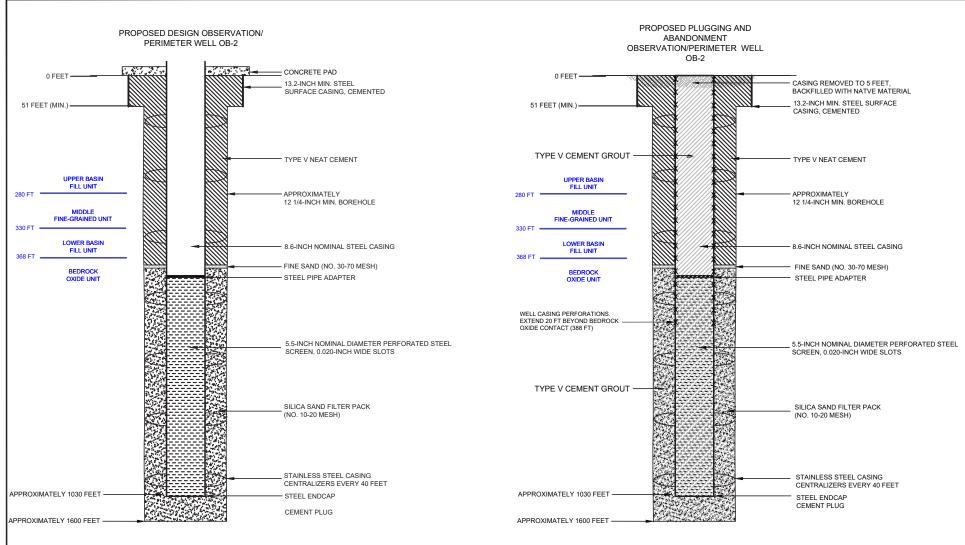
For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.





FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL OB-2 (OW-2, OB-2 CONOCO)

SEPTEMBER 2019 SCALE: AS SHOWN

FIGURE 1

## NOTES

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee							
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	у,						
Permit or EPA ID Nu	ımber	API Number		Full Well Name	·		
R9UIC-AZ3-FY1		11110111101		OB2-1			
State			County				
Arizona			Pinal				
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.0503123							
Surface Location							
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.4285464			
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.							
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I	✓ Notice Prior to Work			Well Rewor	·k		
Class II	Date Expected to Comme	March 2021		/ Plugging a	nd Abandonment		
✓ Class III				✓ Plugging a	na Abanaoninent		
Class V	Report After Work  Date Work Ended			Conversion	to a Non-Injection Well		
	Date Work Linded						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	)		Date Signed		
	n, VP - General Manage		Dail	John State of the	10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ **ABANDONMENT** PERIMETER WELL OB2-1 OBSERVATION/PERIMETER WELL OB2-1 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 300 FT 300 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING LOWER BASIN FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (660 FT) IF APPLICABLE 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 620 FEET APPROXIMATELY 620 FEET - PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** OB2-1 **NOTES** SEPTEMBER 2019

FIGURE 1

SCALE: AS SHOWN

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Ph	one Number and/or Email of P	ermittee						
Florence Copper Pro 1575 W Hunt Hwy, Florence, AZ 85132	ject							
Permit or EPA ID Nun	ber	API Number				Full W	/ell Name	1
R9UIC-AZ3-FY11-		ATTRUMBUT				OB2-		
State				County		0.02		
Arizona				Pinal				
Locate well in two dir	Longitude   111 /275277							
SW 1/4 of SE 1/4 of Section 28 Township 4S Range 9E  ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.								
Well Class	iming of Action (pick one)						Type of Action (	pick one)
Class II  ✓ Class III  Class V	Class I  Class II  Class III  Report After Work  Class III  Class III  Report After Work					nd Abandonment		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official Tit	e (Please type or print)	;	Signatur	e				Date Signed
Dan Johnson,	VP - General Manage	r			Dail (	John		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ ABANDONMENT PERIMETER WELL OB2-2 OBSERVATION/PERIMETER WELL OB2-2 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 300 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 360 FT LOWER BASIN LOWER BASIN FILL UNIT 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (820 FT) IF APPLICABLE 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 760 FEET APPROXIMATELY 760 FEET - PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** OB2-2 **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONING	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject				
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			OB-3	
State			County		
Arizona			Pinal		
Surface Location  SE 1/4 of SV  ft. fro	y 1/4 of Section 28  m (N/S) Line of quart m (E/W) Line of quart	Township $4\mathrm{S}$ Ra	Latitude 33	.04905308	
Well Class	Timing of Action (pick one)			Type of Action	(nick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021		Well Rewo	
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of cemp is present, an attempt will be maillow an annular seal to be placed emoved.  Type V cement, or equivalent approximately app	d abandonment operations and abandonment operations are depth to which the well rules be documented. If necessarial to a depth of at least 25 are perforated from at least 20 to at least 20 feet above at in the open well from the out into the annulus and becoment as possible will be and will not be less than the	s at the required depths will be memains open and if any obstructivessary, the well casing will be claim of the surface casing is not feafeet bgs. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from a bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Lee estimated volume of material re	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence deepest and perforated de cut at least 5  ve the contact; s.  nt retainers, as
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signature	9		Date Signed
Dan Johnson	n, VP - General Manage	r	Dail	The state of the s	10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN IRRIGATION ABANDONMENT WELL IRRIGATION WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 20-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 20-INCH MIN. STEEL SURFACE 260 FEET (MIN.) 260 FEET (MIN.) CASING, CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 22-INCH MIN. BOREHOLE 22-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 305 FT 305 FT LOWER BASIN 16-INCH NOMINAL STEEL CASING 16-INCH NOMINAL STEEL CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - STEEL PIPE ADAPTER - STEEL PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (580 FT) IF APPLICABLE 16-INCH NOMINAL DIAMETER PERFORATED STEEL 16-INCH NOMINAL DIAMETER PERFORATED STEEL SCREEN, 0.020-INCH WIDE SLOTS SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 560 FEET APPROXIMATELY 560 FEET STEEL ENDCAP STEEL ENDCAP

560 FT -

OXIDE UNIT

HALEY ALDRICH FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC IRRIGATION WELL OB-3 (McFarland 1, OW-3, Mf H20, MFZ)

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

BEDROCK OXIDE UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	•			
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				OB-4	
State			County		
Arizona			Pinal		
Surface Location  SE 1/4 of SE  ft. from	1/4 of Section 28  m (N/S) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.04765116	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 20  A tremie pipe with described about the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of cemp is present, an attempt will be maillow an annular seal to be placed amoved.  Type V cement, or equivalent approximately app	d abandonment operations a depth to which the well reliso be documented. If necessarial is a depth of at least 25 and a depth of at least 25 are perforated from at least 20 feet above at in the open well from the out into the annulus and become at some as possible will be and will not be less than the	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clean of the surface casing is not feater by. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Lean estimated volume of material respectives.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence deepest and perforated de cut at least 5  ve the contact; s.  nt retainers, as
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

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**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

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For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ ABANDONMENT PERIMETER WELL OB-4 OBSERVATION/PERIMETER WELL OB-4 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT LOWER BASIN LOWER BASIN 3-INCH NOMINAL FIBERGLASS REINFORCED CASING 3-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (366 FT) IF APPLICABLE 3-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 3-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 340 FEET APPROXIMATELY 340 FEET - PVC ENDCAP BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** OB-4

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

**NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	NID ADANDONNE	-111 /	IIIDATII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	el linttee						
Permit or EPA ID Nu	ımber	API Number		Full We	ell Name			
R9UIC-AZ3-FY1				OB-5				
State			County					
Arizona	Arizona Pinal							
Locate well in two	directions from nearest lines of	quarter section and dr	rilling unit Latitude 33	.0474530	09			
Surface Location						_		
SE 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	ange 9E Longitude -1	11.43027	781			
ft. from (N/S)  Line of quarter section  ft. from (E/W)  Line of quarter section.								
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	nce March 2021			Diversion of	ad Abandanmant		
✓ Class III					✓ Plugging ar	nd Abandonment		
Class V	Report After Work				Conversion	to a Non-Injection Well		
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatur	re			Date Signed		
				()		10/3/2019		
Dan Johnson	n, VP - General Manage		2 mil	Total		10/0/2019		

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ ABANDONMENT PERIMETER WELL OB-5 OBSERVATION/PERIMETER WELL OB-5 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 275 FT 275 FT LOWER BASIN LOWER BASIN 3-INCH NOMINAL FIBERGLASS REINFORCED CASING 3-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) IF APPLICABLE 3-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 3-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 340 FEET APPROXIMATELY 340 FEET - PVC ENDCAP 350 FT -OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** OB-5 **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABANDONNIE	-1111 /	IIIDATII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	erimitee.					
Permit or EPA ID No	umber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1	1-1			OB-6			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0512187	77		
Surface Location						_	
NE 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	unge 9E Longitude -11	11.43185	514		
ft. from (E/W)  Line of quarter section  Line of quarter section.							
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	mce March 2021			Diversion of	ad Abandanasas	
✓ Class III					✓ Plugging ar	nd Abandonment	
Class V	Report After Work		_		Conversion	to a Non-Injection Well	
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet blow the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	e	_		Date Signed	
				()		10/3/2019	
Dan Johnson	n, VP - General Manage		2 mil	John Marie M		10/0/2013	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ ABANDONMENT PERIMETER WELL OB-6 OBSERVATION/PERIMETER WELL OB-6 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 272 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 298 FT 298 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) IF APPLICABLE 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 340 FEET APPROXIMATELY 340 FEET PVC ENDCAP 350 FT . BEDROCK OXIDE UNIT OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** OB-6 **NOTES** 

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONNE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	• · · · · · · · · · · · · · · · · · · ·			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1		,		OB7-1	
State			County		
Arizona			Pinal		
Surface Location           SE         1/4 of SV           ft. fro	y 1/4 of Section 28  m (N/S) Line of quart m (E/W) Line of quart	Township $4\mathrm{S}$ Ra	Latitude 33	.04839081	
Well Class	Timing of Action (pick one)			Type of Action	(nick one)
Class I Class II Class III Class V	Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	March 2021		Well Reword	
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of cerning is present, an attempt will be mallow an annular seal to be placed emoved.  Type V cement will be recorded at Type V cement, or equivalent approximately approximately approximately as much of the placed will be used to place Type V cement and the placed will be used to force cement group the placed will be used to force cement group the placed will be used to force cement group the placed will be used to force cement group the placed will be used to force cement group the placed will be used to force cement group the placed will be recorded at the placed will be recorded will be recorded will be recorded at the placed will be recorded will be recorde	d abandonment operations a depth to which the well reliso be documented. If nearest seals.  ade to remove it. If remove to a depth of at least 25 a perforated from at least 25 to at least 20 feet above at in the open well from the out into the annulus and becement as possible will be and will not be less than the	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clean of the surface casing is not feater by. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from a be bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Lean estimated volume of material respectives.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence deepest and perforated de cut at least 5  ve the contact; s.  nt retainers, as
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
Dan Johnson	n, VP - General Manage	r	2		10/3/2019

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN OBSERVATION/ **ABANDONMENT** PERIMETER WELL OB7-1 OBSERVATION/PERIMETER WELL OB7-1 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 370 FT 370 FT LOWER BASIN LOWER BASIN 4-INCH NOMINAL FIBERGLASS REINFORCED CASING 4-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (920 FT) IF APPLICABLE 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 4-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 880 FEET APPROXIMATELY 880 FEET - PVC ENDCAP BEDROCK OXIDE UNIT BEDROCK FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC **OBSERVATION/PERIMETER WELL** 

### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

OB7-1

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	_11 /	MI I IDAVII	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project y,	el linitee				
Permit or EPA ID Nu	umber	API Number		Full W	ell Name	
R9UIC-AZ3-FY1				P5-O		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.046297	49	
Surface Location						_
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	Longitude -1	11.4287	797	
ft. from	m (N/S) Line of quarto	er section	· 72			
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	✓ Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021			Diversion of	ad Abandanmant
✓ Class III					✓ Plugging al	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
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Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
	n, VP - General Manage	r	Doil	Col		10/3/2019
				/		

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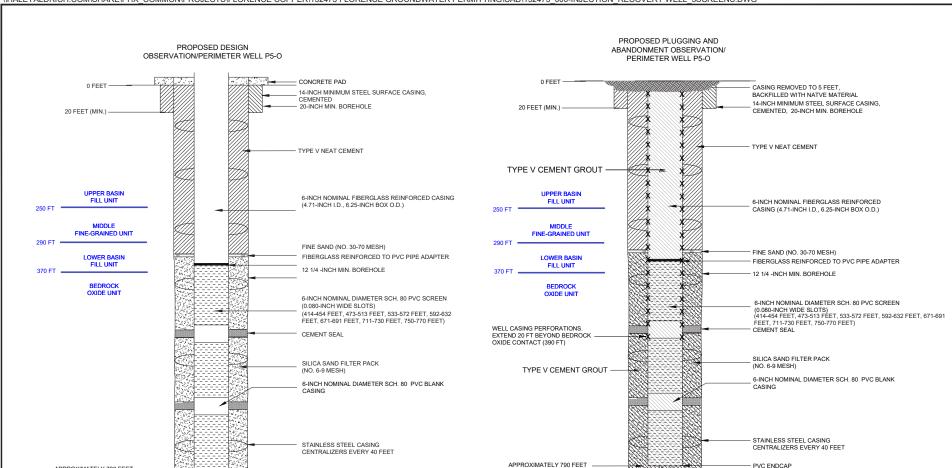
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

PVC ENDCAP





APPROXIMATELY 800 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P5-O

SCALE: AS SHOWN SEPTEMBER 2019

FIGURE 1

#### **NOTES**

APPROXIMATELY 790 FEET

APPROXIMATELY 800 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Phone N	umber and/or Email of Pe	ermittee	, to , , o , o	,			
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number		API Number		Full W	ell Name	·	
R9UIC-AZ3-FY11-1		Airitamoo		P8.1-0			
State			County	1011			
Arizona			Pinal				
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.05206105  Surface Location Longitude -111 4290592							
NW 1/4 of SE 1/4 of Section 28 Township 4S Range 9E  ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.							
Well Class Timing	of Action (pick one)				Type of Action (	oick one)	
Class III  Class V	otice Prior to Work rate Expected to Commer Report After Work Date Work Ended	March 2021			Well Reworl  ✓ Plugging an	· · · · · ·	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet blow the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Pl	ease type or print)	Signa	ture			Date Signed	
Dan Johnson, VP	- General Manage	-	Dail	S		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P8.1-O PERIMETER WELL P8.1-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 280 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (370 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET

APPROXIMATELY 600 FEET

APPROXIMATELY 616 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER **WELL P8.1-0** 

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### **NOTES**

APPROXIMATELY 600 FEET

APPROXIMATELY 616 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

CENTRALIZERS EVERY 40 FEET

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address, Phone Number	r and/or Email of Pe	rmittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number		API Number		Full W	ell Name	·	
R9UIC-AZ3-FY11-1		ATTRUMBU		P8-GU			
State			County				
Arizona			Pinal				
Locate well in two directions from nearest lines of quarter section and drilling unit  Surface Location  NW 1/4 of SE 1/4 of Section 28 Township 4S Range 9E  Longitude -111.4294184							
ft. from (N/S)  Line of quarter section  ft. from (E/W)  Line of quarter section.							
Well Class Timing of Ac	tion (pick one)				Type of Action (	pick one)	
Class II  Class III  Class V  Report	ass II  Date Expected to Commence March 2021  Plugging and Abandonment  Report After Work					d Abandonment	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please t	ype or print)	Signatu	ire			Date Signed	
Dan Johnson, VP - Ge	neral Manager		Dail	S		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER**: Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

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**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **NOTES**

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P8-GU

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONNE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject				
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				P8.2-O	
State			County		
Arizona			Pinal		
Surface Location  NW 1/4 of SE	1/4 of Section 28  m (N/S) Line of quarter (E/W) Line of quarter	Township $4{ m S}$ Ra	Latitude 33	.05212228	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required will be inspected to determine the fany existing surface casing will a pration to enable placement of ceming is present, an attempt will be maillow an annular seal to be placed emoved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement ye, will be used to force cement group has been obstructed, as much compared to the provided and the pr	a bandonment operation: a depth to which the well related by the documented. If nevent seals.  adde to remove it. If remove to a depth of at least 25 be perforated from at least 25 be to at least 20 feet above at in the open well from the put into the annulus and become at a possible will be and will not be less than the	s at the required depths will be m remains open and if any obstruction cessary, the well casing will be clearly all of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from a selection between the below of the well casing to the ehind perforated screen intervals placed from 100 feet below the Lee estimated volume of material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence deepest  and perforated de cut at least 5  we the contact; s.  nt retainers, as
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P8.2-O PERIMETER WELL P8.2-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (400 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 596.5 FEET

APPROXIMATELY 610 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P8.2-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 596.5 FEET

APPROXIMATELY 610 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABANDONNIE	-IN I AI	IIIDAVII		
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project	el linuo					
Permit or EPA ID Nu	ımber	API Number		Full Wel	II Name		
R9UIC-AZ3-FY1				P12-O			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	Illing unit Latitude 33	.0463418	7		
Surface Location						_	
SE 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.432127	74		
ft. from (N/S)  Line of quarter section  ft. from (E/W)  Line of quarter section.							
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	nce March 2021			Diversing or	ad Abandanasas	
✓ Class III					✓ Plugging ar	nd Abandonment	
Class V	Report After Work				Conversion	to a Non-Injection Well	
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	9			Date Signed	
	n, VP - General Manage	r	2 mil	Col	_	10/3/2019	
				/			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P12-O PERIMETER WELL P12-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 320 FT 320 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (400 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 960 FEET

APPROXIMATELY 999 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P12-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 960 FEET

APPROXIMATELY 999 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

PVC ENDCAP

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Nu	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1				P13.1-O			
State			County				
Arizona			Pinal				
Locate well in two	Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.05210103						
Surface Location							
NW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.4351053			
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.							
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I	√ Notice Prior to Work			Well Rewo	rk		
Class II	Date Expected to Comme	March 2021		/ Plugging a	nd Abandonment		
✓ Class III				✓ Plugging a	na Abanaoninent		
Class V	Report After Work			Conversion	n to a Non-Injection Well		
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	9		Date Signed		
	n, VP - General Manage		2 mil		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P13.1-O PERIMETER WELL P13.1-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT 720 FT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (740 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1449 FEET - PVC ENDCAP APPROXIMATELY 1449 FEET



APPROXIMATELY 1475 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P13.1-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1475 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	TIP ABAITBOILINE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	•			
Permit or EPA ID No	umber	API Number		Full Well Name	
R9UIC-AZ3-FY1				P13.2-O	
State			County		
Arizona			Pinal		
Surface Location NW 1/4 of SV	m (N/S) Line of quarter (E/W) Line of quarter	Township $4\mathrm{S}$ Ra	Latitude 33	.05212228	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.					
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signature	<del></del>		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P13.2-O PERIMETER WELL P13.2-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 320 FT 320 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (670 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 1380 FEET

APPROXIMATELY 1400 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P13.2-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1380 FEET

APPROXIMATELY 1400 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

- PVC ENDCAP

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Nu	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1				P13-GL			
State			County				
Arizona Pinal							
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.05211091							
Surface Location							
NW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	1.4355984			
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.							
Well Class	Timing of Action (pick one)			Type of Action	pick one)		
Class I	<b>√</b> Notice Prior to Work			Well Rewor	k		
Class II	Date Expected to Comme	mce March 2021		/ Plugging a	nd Abandonment		
✓ Class III				✓ Plugging a	na Abanaoninent		
Class V	Report After Work  Date Work Ended			Conversion	to a Non-Injection Well		
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	)		Date Signed		
	n, VP - General Manage		Doil	John State of the	10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P13-GL PERIMETER WELL P13-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 270 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 320 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (790 FT) IF APPLICABLE 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 760 FEET - PVC ENDCAP APPROXIMATELY 760 FEET 770 FT -BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P13-GL **NOTES** SEPTEMBER 2019 1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

FIGURE 1

SCALE: AS SHOWN

United States Environmental Protection Agency

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Permit or EPA ID Number	API Number	Full Well Name						
R9UIC-AZ3-FY11-1		P15-GL						
State	County							
Arizona								
Locate well in two directions from nearest lines of quarter section and drilling unit  Surface Location  SW 1/4 of SW 1/4 of Section 28 Township 4S Range 9E  ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.								
Well Class Timing of Action (pick one)		Type of Action (pick one)						
Class I  Class II  Class III  Class V  Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well						
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Dan Johnson, VP - General Manage	r 2	10/3/2019						

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United States Environmental Protection Agency

Name and Address, I	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	-INI AI	IIIDAVII		
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For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P15-O PERIMETER WELL P15-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 275 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 310 FT 310 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (510 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1321 FEET PVC ENDCAP APPROXIMATELY 1321 FEET



APPROXIMATELY 1380 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P15-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1380 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number	API Number	Full Well Name					
R9UIC-AZ3-FY11-1		P19.1-O					
State	County						
Arizona Pinal							
Locate well in two directions from nearest lines of quarter section and drilling unit  Surface Location  SE 1/4 of NW 1/4 of Section 28 Township 4S Range 9E  ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.							
Well Class Timing of Action (pick one)		Type of Action (pick one)					
Class I Class II Class III Class V  Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please type or print)	Signature	Date Signed					
Dan Johnson, VP - General Manage	r 2	10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P19.1-O PERIMETER WELL P19.1-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (380 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 621 FEET - PVC ENDCAP APPROXIMATELY 621 FEET



APPROXIMATELY 680 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P19.1-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 680 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	MID ABANDONNIE	IN ALLIBATII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	•					
Permit or EPA ID No	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1				P19.2-O			
State			County				
Arizona	·						
Surface Location   SE	W 1/4 of Section 28 m (N/S) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.05377851			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	<u> </u>		Date Signed		
	n, VP - General Manage		Dail		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P19.2-O PERIMETER WELL P19.2-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 300 FT 300 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT 420 FT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (440 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 622 FEET

APPROXIMATELY 630 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P19.2-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 622 FEET

APPROXIMATELY 630 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	TIP ABAITBOILINE	IN ALLIBATII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	• · · · · · · · · · · · · · · · · · · ·					
Permit or EPA ID Nu	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1				P28.1-O			
State	State County						
Arizona	·						
Surface Location  SE 1/4 of SE  ft. from	1/4 of Section 28  m (N/S) Line of quart	Township $4{ m S}$ Ra	Latitude 33	11.4238744			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class II  Class III  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021			rk nd Abandonment n to a Non-Injection Well		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	9		Date Signed		
	n, VP - General Manage	r	Dail		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P28.1-O PERIMETER WELL P28.1-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT 280 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (380 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH 80 PVC SCREEN, 0.020-INCH WIDE WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 509 FEET - PVC ENDCAP APPROXIMATELY 509 FEET



APPROXIMATELY 520 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P28.1-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 520 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of	Permittee					
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132						
Permit or EPA ID Number	API Number	Full Well Name				
R9UIC-AZ3-FY11-1		P28.2-O				
State	County					
Arizona Pinal						
Locate well in two directions from nearest lines of quarter section and drilling unit  Surface Location  SE 1/4 of SE 1/4 of Section 28 Township 4S Range 9E  ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.						
Well Class Timing of Action (pick one)		Type of Action (pi	ick one)			
Class II  Class III  Class III  Class V  Report After Work  Date Work Ended	March 2021	Well Rework  ✓ Plugging and	I Abandonment o a Non-Injection Well			
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official Title (Please type or print)	Signature		Date Signed			
Dan Johnson, VP - General Manag	er		10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P28.2-O PERIMETER WELL P28.2-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 280 FT 280 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (360 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH 80 PVC SCREEN, 0.020-INCH WIDE WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET



APPROXIMATELY 507 FEET

APPROXIMATELY 519 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P28.2-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 507 FEET

APPROXIMATELY 519 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

- PVC ENDCAP

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of P	ermittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132							
Permit or EPA ID Number	API Number	Full Well Name					
R9UIC-AZ3-FY11-1		P28-GL					
State	State County						
Arizona Pinal							
Locate well in two directions from nearest lines of Surface Location  SE 1/4 of SE 1/4 of Section 28  ft. from (N/S) Line of quart ft. from (E/W) Line of quart	Township $4s$ Range $9E$ Longitude $-11$	0485829 1.4235895					
Well Class Timing of Action (pick one)		Type of Action (pick one)					
Class I  Class II  Class III  Class IV  Report After Work  Date Work Ended	March 2021	Well Rework  ✓ Plugging and Abandonment  Conversion to a Non-Injection Well					
A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (Please type or print)	Signature	Date Signed					
Dan Johnson, VP - General Manage	r 2	10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P28-GL PERIMETER WELL P28-GL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 12-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 12-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 260 FT 10-INCH MIN. BOREHOLE 10-INCH MIN. BOREHOLE MIDDLE MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 280 FT LOWER BASIN FILL UNIT LOWER BASIN 5-INCH NOMINAL FIBERGLASS REINFORCED CASING 5-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (340 FT) IF APPLICABLE 5-INCH NOMINAL DIAMETER SCH. 5-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 309 FEET - PVC ENDCAP APPROXIMATELY 309 FEET BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT FLORENCE COPPER, INC. FLORENCE, ARIZONA ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P28-GL **NOTES** SEPTEMBER 2019 1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS. FIGURE 1 SCALE: AS SHOWN

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project				
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				P39-O	
State			County		
Arizona			Pinal		
Surface Location           NE         1/4 of N           ft. fro	1/4 of Section 33  m (N/S) Line of quartem (E/W) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.0446688	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk nd Abandonment n to a Non-Injection Well
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.					
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage		Dail		10/3/2019

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**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P39-O PERIMETER WELL P39-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 250 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 280 FT LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (400 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER 80 PVC SCREEN, 0.020-INCH WIDE SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 847 FEET - PVC ENDCAP APPROXIMATELY 847 FEET



APPROXIMATELY 915 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P39-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 915 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONNE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	• · · · · · · · · · · · · · · · · · · ·			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				P49-O	
State			County	- 1-	
Arizona			Pinal		
Surface Location NW 1/4 of NV ft. fro	N 1/4 of Section 33  m (N/S) Line of quart m (E/W) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.04496309	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class III  Class V	Notice Prior to Work Date Expected to Comme Report After Work Date Work Ended	March 2021		Well Reword	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well.  The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet blow the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.					
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)					
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage		Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED DESIGN PROPOSED PLUGGING AND OBSERVATION/PERIMETER WELL ABANDONMENT OBSERVATION/ P49-O PERIMETER WELL P49-O CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 295 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 320 FT 320 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER - FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (760 FT) 6-INCH NOMINAL DIAMETER SCH. 6-INCH NOMINAL DIAMETER 80 PVC SCREEN, 0.020-INCH WIDE SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH) STAINLESS STEEL CASING STAINLESS STEEL CASING CENTRALIZERS EVERY 40 FEET CENTRALIZERS EVERY 40 FEET APPROXIMATELY 1242.5 FEET - PVC ENDCAP APPROXIMATELY 1242.5 FEET



APPROXIMATELY 1288 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC OBSERVATION/PERIMETER WELL P49-O

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

## NOTES

APPROXIMATELY 1288 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	INI ALLIDAVII	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project	STITING STATE OF THE STATE OF T			
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			PW-1	
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.04995429	
Surface Location			Longitude _11	11.4268967	
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E	11.1200907	
	m (N/S) Line of quarte				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	Notice Prior to Work			Well Rewo	·k
Class II	Date Expected to Comme	nce March 2021		Diameter -	ad Abaadaaaaa
✓ Class III				✓ Plugging a	nd Abandonment
Class V	Report After Work		_	Conversion	to a Non-Injection Well
	Date Work Ended				
A workover rig The well casing and condition of screen or perform as needed to a feet bgs and reform at least 20  A tremie pipe with described above the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of ceming is present, an attempt will be maillow an annular seal to be placed emoved.  Type V cement, or equivalent approximately approximately a property of the pro	depth to which the well reliso be documented. If ned ent seals.  adde to remove it. If remove to a depth of at least 25 to at least 20 feet above at in the open well from the out into the annulus and because the personal of the personal o	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clean of the surface casing is not feater by. In areas of agricultural 20 feet below the bedrock-LBFU of the top of the MFGU; and from all be bottom of the well casing to the enhind perforated screen intervals placed from 100 feet below the Lean estimated volume of material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence deepest  and perforated de cut at least 5  we the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	9		Date Signed
	n, VP - General Manage	r	2 mil	John	10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

STAINLESS STEEL CASING

STEEL ENDCAP

CENTRALIZERS EVERY 40 FEET

\\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN INDUSTRIAL ABANDONMENT WELL INDUSTRIAL WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 18-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 18-INCH MIN. STEEL SURFACE 540 FEET (MIN.) -540 FEET (MIN.) CASING, CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 290 FT 20-INCH MIN. BOREHOLE 20-INCH MIN. BOREHOLE MIDDI F MIDDLE FINE-GRAINED UNIT FINE-GRAINED UNIT 340 FT LOWER BASIN LOWER BASIN 14-INCH NOMINAL STEEL CASING 14-INCH NOMINAL STEEL CASING FILL UNIT FILL UNIT - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) - STEEL PIPE ADAPTER STEEL PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (969 FT) IF APPLICABLE 14-INCH NOMINAL DIAMETER PERFORATED STEEL SCREEN, 0.020-INCH WIDE SLOTS 14-INCH NOMINAL DIAMETER PERFORATED STEEL SCREEN, 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)



BEDROCK OXIDE UNIT

> FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC INDUSTRIAL WELL PW-1 (Conoco 1, WW-1)

STAINLESS STEEL CASING

STEEL ENDCAP

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

BEDROCK OXIDE UNIT

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	, ,					
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,							
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	1		
R9UIC-AZ3-FY1		ATTIGUIDO		PW1-				
State			County	11				
Arizona			Pinal					
Locate well in two o	lirections from nearest lines of	quarter section and	drilling unit Latitude 33	.051198	346			
Surface Location								
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.4312	.232			
	m (N/S) Line of quart							
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	nce March 2021						
✓ Class III					✓ Plugging a	nd Abandonment		
Class V	Report After Work				Conversion	to a Non-Injection Well		
Sidoo V	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the well. The well casing will be inspected to determine the depth to which the well remains open and if any obstructions are present in the casing; the presence and condition of any existing surface casing will also be documented. If necessary, the well casing will be cleaned out to the bottom of the deepest screen or perforation to enable placement of cement seals.  If surface casing is present, an attempt will be made to remove it. If removal of the surface casing is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the surface casing cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open well from the bottom of the well casing to the top of the well casing. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated screen intervals, as necessary.  If the well casing has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the casing.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signat	ure			Date Signed		
Dan Johnson	n, VP - General Manage	r	Dail	John		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

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Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN TEST/ OBSERVATION/PERIMETER WELL ABANDONMENT TEST/OBSERVATION/PERIMETER WELL PW1-1 PW1-1 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 305 FT 305 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (380 FT) 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

> HALEY ALDRICH

APPROXIMATELY 740 FEET

APPROXIMATELY 760 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC TEST/OBSERVATION/PERIMETER WELL PW1-1

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 740 FEET

APPROXIMATELY 760 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

- PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	IN ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	•			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				PW-2	
State			County		
Arizona			Pinal		
Surface Location  NE 1/4 of SV  ft. fro	V 1/4 of Section 28  m (N/S) Line of quart m (E/W) Line of quart	Township $4{ m S}$ Ra	Latitude 33	.05283989	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021		Well Reword	
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of cemp is present, an attempt will be maillow an annular seal to be placed amoved.  Type V cement, or equivalent approximately app	d abandonment operations a depth to which the well reliso be documented. If necessarial is a depth of at least 25 and a depth of at least 25 are perforated from at least 20 feet above at in the open well from the out into the annulus and become at some as possible will be and will not be less than the	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clearly of the surface casing is not feater bys. In areas of agricultural 20 feet below the bedrock-LBFU of the top of the MFGU; and from all the bottom of the well casing to the enind perforated screen intervals a placed from 100 feet below the Let estimated volume of material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	ell. the presence e deepest  and perforated be cut at least 5  we the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. ine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	9		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN INDUSTRIAL ABANDONMENT WELL INDUSTRIAL WELL CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 18-INCH MIN. STEEL SURFACE CASING, CEMENTED BACKFILLED WITH NATVE MATERIAL 18-INCH MIN. STEEL SURFACE 621 FEET (MIN.) 621 FEET (MIN.) CASING, CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN FILL UNIT UPPER BASIN FILL UNIT APPROXIMATELY APPROXIMATELY 286 FT 20-INCH MIN. BOREHOLE 20-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT MIDDLE FINE-GRAINED UNIT 311 FT 311 FT 14-INCH NOMINAL STEEL CASING 14-INCH NOMINAL STEEL CASING **FILL UNIT** - FINE SAND (NO. 30-70 MESH) FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT BEDROCK OXIDE UNIT - STEEL PIPE ADAPTER STEEL PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (623 FT) 14-INCH NOMINAL DIAMETER PERFORATED STEEL 14-INCH NOMINAL DIAMETER PERFORATED STEEL SCREEN, 0.020-INCH WIDE SLOTS SCREEN, 0.020-INCH WIDE SLOTS

ALDRICH

TYPE V CEMENT GROUT

APPROXIMATELY 981 FEET

APPROXIMATELY 981 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC INDUSTRIAL WELL PW-2 (Conoco 2)

SILICA SAND FILTER PACK

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

(NO. 10-20 MESH)

STEEL ENDCAP

SEPTEMBER 2019 SCALE: AS SHOWN

FIGURE 1

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

SILICA SAND FILTER PACK

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

(NO. 10-20 MESH)

STEEL ENDCAP

### **NOTES**

APPROXIMATELY 981 FEET

APPROXIMATELY 981 FEET

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of P	ermittee	ME ABANBONNE	INI ALLIBATII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	roject	<b>VIII</b>			
Permit or EPA ID No	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				PW2-1	
State			County		
Arizona			Pinal		
Surface Location  NW 1/4 of SE	1/4 of Section 28  m (N/S) Line of quarter (E/W) Line of quarter	Township $4_{\rm S}$ Ra	Latitude 33	.0504259	
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	March 2021			rk nd Abandonment n to a Non-Injection Well
A workover rig The well casin, and condition of screen or perform as needed to a feet bgs and reform at least 2.  A tremie pipe of described about the well casing.  The volume of	capable of performing the required will be inspected to determine the fany existing surface casing will a pration to enable placement of ceming is present, an attempt will be maillow an annular seal to be placed emoved.  asing cannot be removed, it will be to feet below the base of the MFGU will be used to place Type V cement ye, will be used to force cement group has been obstructed, as much compared to the provided and the pr	d abandonment operation: e depth to which the well r also be documented. If ne- lent seals.  ade to remove it. If remov to a depth of at least 25 e perforated from at least 2 t to at least 20 feet above at in the open well from the but into the annulus and b element as possible will be	s at the required depths will be memains open and if any obstruction cessary, the well casing will be clearly all of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from all the bottom of the well casing to the ehind perforated screen intervals placed from 100 feet below the Les estimated volume of material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e deepest e and perforated de cut at least 5 eve the contact; is.  In tretainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. line and imprisonment. (Ref. 40	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN TEST/ OBSERVATION/PERIMETER WELL ABANDONMENT TEST/OBSERVATION/PERIMETER WELL PW2-1 PW2-1 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 260 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 295 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (360 FT) 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)



APPROXIMATELY 620 FEET

APPROXIMATELY 640 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC TEST/OBSERVATION/PERIMETER WELL PW2-1

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 620 FEET

APPROXIMATELY 640 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

- PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIL	INI ALLIDAVII	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project				
Permit or EPA ID Nu	ımber	API Number		Full Well Name	
R9UIC-AZ3-FY1				PW2-2	
State			County		
Arizona			Pinal		
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.04861906	
Surface Location					
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	Longitude -11	11.427608	
ft. from	m (N/S) Line of quarte	er section	-  22		
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class I	<b>√</b> Notice Prior to Work			Well Rewo	rk
Class II	Date Expected to Comme	mce March 2021		/ Blugging o	nd Abandonment
✓ Class III				→ Flugging a	nd Abandonment
Class V	Report After Work			Conversion	n to a Non-Injection Well
	Date Work Ended				
A workover rig The well casing and condition of screen or perform as needed to a feet bgs and reform at least 20  A tremie pipe with described above the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of ceming is present, an attempt will be maillow an annular seal to be placed emoved.  Type V cement, or equivalent approximately approximately a property of the pro	abandonment operations of depth to which the well reliso be documented. If necent seals.  adde to remove it. If remove to a depth of at least 25 aperforated from at least 25 to at least 20 feet above to in the open well from the out into the annulus and because the depth of the	s at the required depths will be moremains open and if any obstruction cessary, the well casing will be closed of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU of the top of the MFGU; and from all the bottom of the well casing to the behind perforated screen intervals at placed from 100 feet below the Lee estimated volume of material research.	oved in and set up over the wons are present in the casing; eaned out to the bottom of the asible, it will be left in the hole use, the surface casing will be contact to at least 20 feet about least 25 feet bgs to 5 feet bg top of the well casing. Ceme, as necessary.	the presence e deepest  and perforated e cut at least 5  we the contact; is.  nt retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	e		Date Signed
	n, VP - General Manage	r	Dail		10/3/2019
				•	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

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For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN TEST/ OBSERVATION/PERIMETER WELL ABANDONMENT TEST/OBSERVATION/PERIMETER WELL PW2-2 PW2-2 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 265 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 305 FT 305 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (380 FT) 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)



APPROXIMATELY 760 FEET

APPROXIMATELY 800 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC TEST/OBSERVATION/PERIMETER WELL PW2-2

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### **NOTES**

APPROXIMATELY 760 FEET

APPROXIMATELY 800 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

- PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	-14 1 /7	HIDAVII	
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Project	el linttee				
Permit or EPA ID Nu	ımber	API Number		Full We	ell Name	
R9UIC-AZ3-FY1	1-1			PW7-1		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.048425	23	
Surface Location			Lampituda 11	11 42005	72.1	_
SE 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	Longitude -11	11.43097	/31	
	m (N/S) Line of quartom (E/W) Line of quartom					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021			Diversion of	ad Abandannant
✓ Class III					✓ Plugging ai	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
sides r	Date Work Ended					
A workover rig The well casing and condition of screen or perform as needed to a feet bgs and reform at least 20  A tremie pipe with described above the well casing.  The volume of	capable of performing the required gwill be inspected to determine the of any existing surface casing will a pration to enable placement of ceming is present, an attempt will be mallow an annular seal to be placed emoved.  Type V cement, or equivalent approximately approximately a property of the process of the mallow and the place of the mallow and the placed emoved.  Type V cement, or equivalent approximately a property of the process of the place of the	a depth to which the well is a depth to which the well is be documented. If ne ent seals.  ade to remove it. If remove to a depth of at least 25 a perforated from at least to at least 20 feet above at in the open well from the out into the annulus and be the mement as possible will be ad will not be less than the	s at the required depths will be meremains open and if any obstructic cessary, the well casing will be claral of the surface casing is not feat feet bgs. In areas of agricultural 20 feet below the bedrock-LBFU the top of the MFGU; and from all the bottom of the well casing to the behind perforated screen intervals as placed from 100 feet below the Lee estimated volume of material research.	oved in ar ons are pr eaned out asible, it w use, the s contact to t least 25 top of the i, as neces	and set up over the waresent in the casing; to the bottom of the will be left in the hole surface casing will be at least 20 feet aborties to 5 feet bg well casing. Cemeissary.	ell. the presence deepest  and perforated e cut at least 5  we the contact; s.  nt retainers, as
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
	n, VP - General Manage	r	2 mil	Cole .		10/3/2019
				/		

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Saved by: MNICHOLLS Printed: 7/25/2019 7:20 PM Sheet: HA-FIG-A-L(2) \\HALEYALDRICH.COM\SHARE\PHX COMMON\PROJECTS\FLORENCE COPPER\132473 FLORENCE GROUNDWATER PERMITTING\CAD\132473 000-OBSERVATION WELL CONSTRUCTION DIAGRAM.DWG PROPOSED PLUGGING AND PROPOSED DESIGN TEST/ OBSERVATION/PERIMETER WELL ABANDONMENT TEST/OBSERVATION/PERIMETER WELL PW7-1 PW7-1 CONCRETE PAD 0 FEET 0 FEET CASING REMOVED TO 5 FEET, 14-INCH MIN. STEEL SURFACE CASING, BACKFILLED WITH NATVE MATERIAL CEMENTED 14-INCH MIN. STEEL SURFACE CASING, 20 FEET (MIN.) 20 FEET (MIN.) CEMENTED TYPE V CEMENT GROUT TYPE V NEAT CEMENT TYPE V NEAT CEMENT UPPER BASIN UPPER BASIN FILL UNIT FILL UNIT APPROXIMATELY APPROXIMATELY 292 FT 12-INCH MIN. BOREHOLE 12-INCH MIN. BOREHOLE MIDDLE FINE-GRAINED UNIT 370 FT 370 FT LOWER BASIN LOWER BASIN 6-INCH NOMINAL FIBERGLASS REINFORCED CASING 6-INCH NOMINAL FIBERGLASS REINFORCED CASING FILL UNIT - FINE SAND (NO. 30-70 MESH) - FINE SAND (NO. 30-70 MESH) BEDROCK OXIDE UNIT OXIDE UNIT FIBERGLASS REINFORCED TO PVC PIPE ADAPTER FIBERGLASS REINFORCED TO PVC PIPE ADAPTER WELL CASING PERFORATIONS. EXTEND 20 FT BEYOND BEDROCK OXIDE CONTACT (460 FT) 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 6-INCH NOMINAL DIAMETER SCH. 80 PVC SCREEN, 0.020-INCH WIDE SLOTS 0.020-INCH WIDE SLOTS TYPE V CEMENT GROUT SILICA SAND FILTER PACK SILICA SAND FILTER PACK (NO. 10-20 MESH) (NO. 10-20 MESH)

> HALEY ALDRICH

APPROXIMATELY 880 FEET

APPROXIMATELY 900 FEET

FLORENCE COPPER, INC. FLORENCE, ARIZONA

ABANDONMENT SCHEMATIC TEST/OBSERVATION/PERIMETER WELL PW7-1

STAINLESS STEEL CASING

CENTRALIZERS EVERY 40 FEET

SEPTEMBER 2019

SCALE: AS SHOWN

FIGURE 1

### NOTES

APPROXIMATELY 880 FEET

APPROXIMATELY 900 FEET

1. WELL DESIGN DETAILS ARE BASED ON CORE HOLE AND WELL LOG RECORDS.

STAINLESS STEEL CASING

- PVC ENDCAP

CENTRALIZERS EVERY 40 FEET

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	7,							
Permit or EPA ID No	ımber	API Number		Full W	ell Name			
R9UIC-AZ3-FY1				Shaft				
State			County					
Arizona			Pinal					
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.05091148								
Surface Location			Lampituda	11 1202	120			
NW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E	11.4292	428			
	m (N/S) Line of quart							
Well Class	Timing of Action (pick one)				Type of Action (p	ick one)		
Class I	✓ Notice Prior to Work				Well Rework	1		
Class II	Date Expected to Comme	March 2021			/ Plugging an	d Abandonment		
✓ Class III					V999			
Class V	Report After Work  Date Work Ended				Conversion	to a Non-Injection Well		
	Date Work Ended							
A workover rig The casing will condition of an cement seals. A tremie pipe w If the casing ha	capable of performing the require be inspected to determine the de y existing surface casing will also In areas of agricultural use, the cuill be used to place Type V cemeins been obstructed, as much cemeins	d abandonment opera pth to which the well r be documented. If nec asing will be cut at lea nt in the shaft from the ent as possible will be nd will not be less than	e bottom of the well casing to the top of placed from 100 feet below the LBFU in the estimated volume of material re	noved in an are present to the boot of the cas	nd set up over the sha nt in the casing; the p ottom to enable place ing.	aft. resence and ment of he casing.		
attachments a information is	nd that, based on my inquiry o	ersonally examined f those individuals i I am aware that the	Certification  I and am familiar with the informatimmediately responsible for obtained are significant penalties for sul	ining the	information, I belie	ve that the		
Name and Official T	itle (Please type or print)	Signa	ature	( and		Date Signed		
	n, VP - General Manage		Diel	S		10/3/2019		

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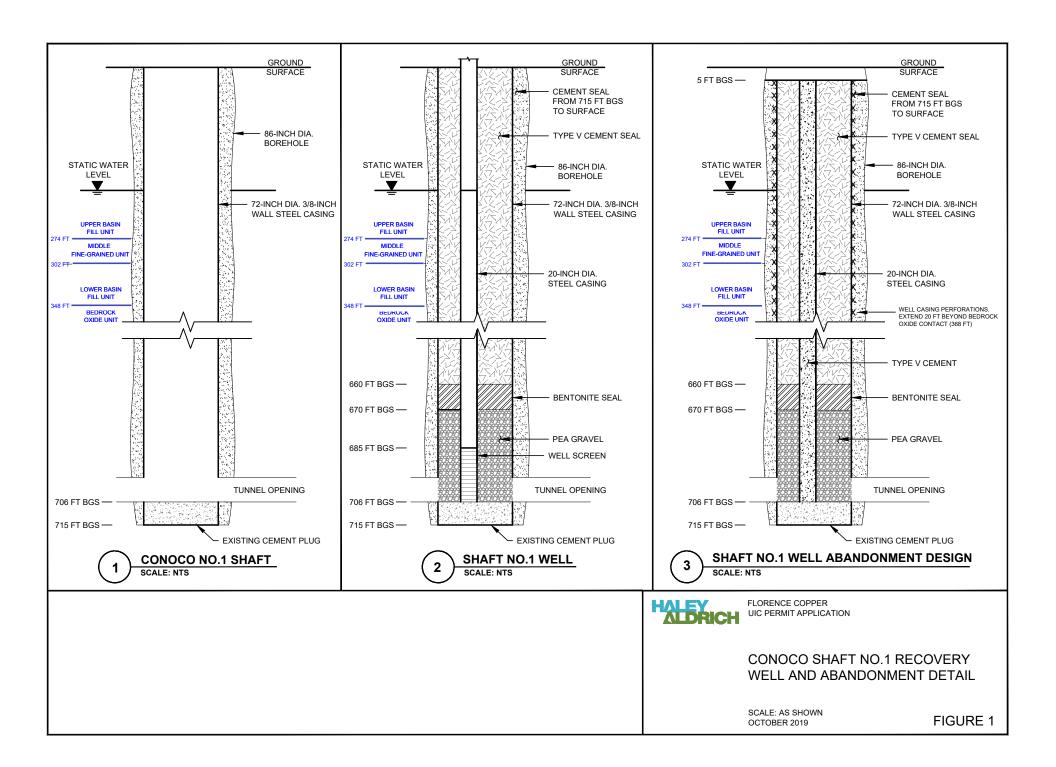
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**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	у,					
Permit or EPA ID Nu	ımber	API Number		Full We	II Name	
R9UIC-AZ3-FY1		ATTRAMISON		Airshaf		
State			County	11101141		
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	Illing unit Latitude 33	.0511464	17	
Surface Location						_
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.42924	05	
ft. from	m (N/S) Line of quart	er section	72			
Well Class	Timing of Action (pick one)				Type of Action (p	ick one)
Class I	✓ Notice Prior to Work				Well Rework	
Class II	Date Expected to Comme	March 2021			/ Plugging an	d Abandonment
✓ Class III					✓ Plugging an	a Abanaoninon
Class V	Report After Work  Date Work Ended				Conversion	to a Non-Injection Well
	Date Work Linded					
A workover rig The casing will condition of an cement seals. A tremie pipe v If the casing ha	capable of performing the required be inspected to determine the depy existing surface casing will also In areas of agricultural use, the covill be used to place Type V cements been obstructed, as much cementary to compare the control of the cont	d abandonment operations of the well rema be documented. If necessions will be cut at least 5 at in the shaft from the bottent as possible will be placed will not be less than the	e at the required depths will be more open and if any obstructions a arry, the casing will be cleaned out feet bgs and removed.  It is a summary of the well casing to the top of the depth of the well casing to the LBFU estimated volume of material research.	noved in and are present at to the both of the casir J-bedrock of	d set up over the sha t in the casing; the p ttom to enable place ng.	oft. esence and ment of he casing.
attachments a information is	the penalty of law that I have p nd that, based on my inquiry o true, accurate, and complete. fine and imprisonment. (Ref. 4	ersonally examined and f those individuals imm I am aware that there a	ediately responsible for obtain	ining the i	nformation, I belie	e that the
Name and Official T	itle (Please type or print)	Signature	)			Date Signed
Dan Johnson	n, VP - General Manage	er	200	Cal.		10/3/2019
				/		

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PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

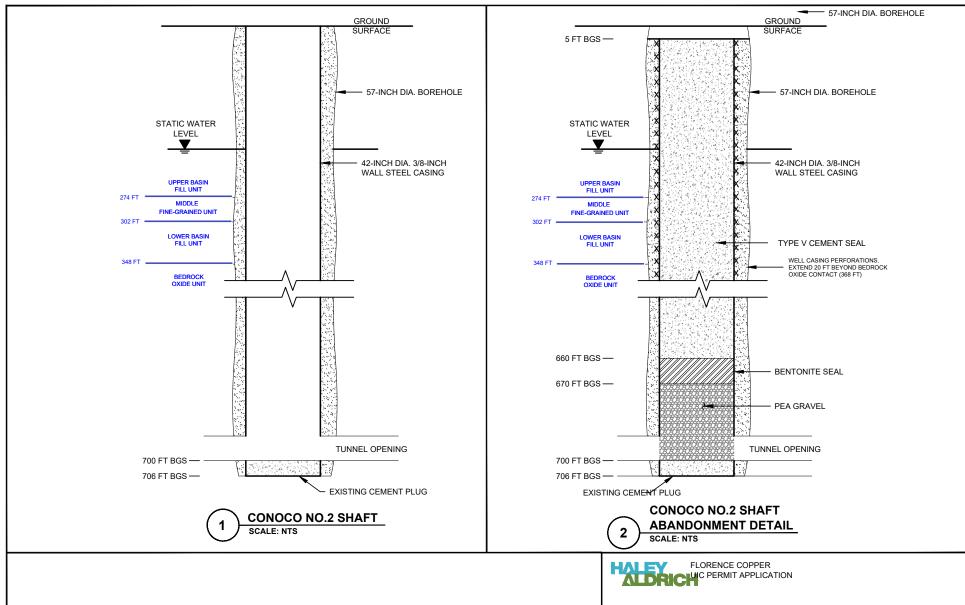
For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.





# **EXHIBIT E-3**

Plugging and Abandonment Forms for Core Holes within AOR

United States Environmental Protection Agency

Name and Address. I	Phone Number and/or Email of Po	ermittee	IND ADAILDONNIE	-111 /	IIIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,					
Permit or EPA ID No	umber	API Number		Full We	ell Name	
R9UIC-AZ3-FY1	1-1			5		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.054943	82	
Surface Location						
SE 1/4 of N	W 1/4 of Section 28	Township 4S Ra	unge 9E Longitude -11	11.43387	705	
ft. fro	m (N/S) Line of quarte	er section	0 00			
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	nce March 2021				
✓ Class III					✓ Plugging ar	d Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The core hole and condition of bedrock-LBFU  If collar is presion an annular seal least 20 feet bedreath the collar calleast 20 feet bedreath th	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cerent, an attempt will be made to remail to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at least will be used to place Type V cement ve, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	abandonment operation: depth to which the hole re cumented. If necessary, ment seals.  nove it. If removal of the c 25 feet bgs. In areas of a ed from at least 20 feet be ast 20 feet above the top  It in the open core hole fro out into the annulus and b as possible will be placed and will not be less than the	s at the required depths will be me mains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left agricultural use, the surface casing allow the bedrock-LBFU contact to of the MFGU; and from at least 200 mm the bottom of the core hole to ehind perforated intervals, as need from 100 feet below the LBFU-be estimated volume of material research.	oved in ar ns are pre to a depth in the hole ng will be o o at least 2 5 feet bgs the top of cessary.	and set up over the co sent in the core hole of at least 100 feet the e and perforated as no out at least 5 feet bgs 20 feet above the core is to 5 feet bgs.	re hole. ; the presence below the eeded to allow and removed. stact; from at ent retainers, as e core hole.
attachments a information is	the penalty of law that I have po nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the	information, I belie	ve that the
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
				()		10/3/2019
Dan Johnson	n, VP - General Manage	r	2 mil	100		10/3/2018

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

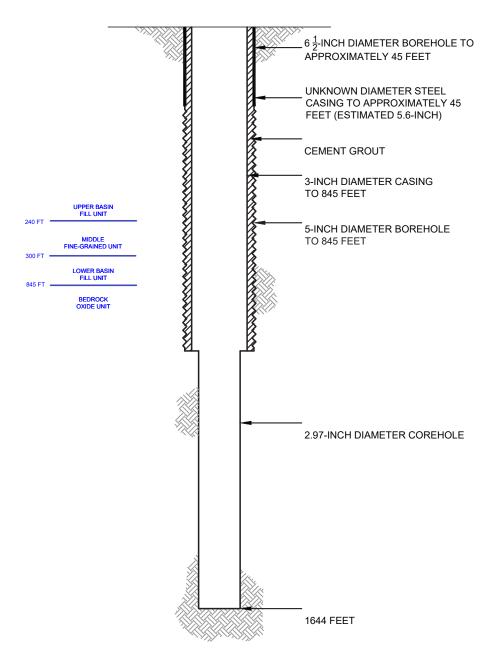
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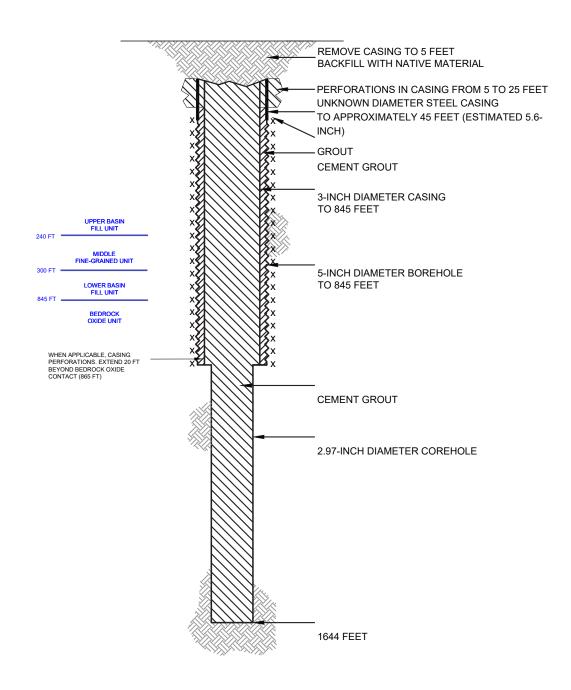
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### **AS-BUILT COREHOLE 5**



### PROPOSED PLUGGING AND ABANDONMENT COREHOLE 5





FLORENCE COPPER, INC. FLORENCE, ARIZONA

**COREHOLE 5 DIAGRAM** 



United States Environmental Protection Agency

Name and Address, I	Phone Number and/or Email of P		ND ADANDONNE	INI ALLIDAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,				
Permit or EPA ID No	umber	API Number		Full Well Name	
R9UIC-AZ3-FY1	1-1			6S	
State			County		
Arizona			Pinal		
Locate well in two of Surface Location	directions from nearest lines of	quarter section and dri	Latitude 33.		
NE 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	1.4241108	
ft. fro	m (N/S) Line of quarto	er section			
Well Class	Timing of Action (pick one)			Type of Action	(pick one)
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021			rk and Abandonment n to a Non-Injection Well
A workover rig The core hole and condition of bedrock-LBFU  If collar is presion an annular seal least 20 feet bedreath the collar calleast 20 feet bedreath th	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of certain, an attempt will be made to renal to be placed to a depth of at least mot be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved	a bandonment operations depth to which the hole rei cumented. If necessary, to ment seals.  In ove it. If removal of the coat 25 feet bgs. In areas of a sed from at least 20 feet be ast 20 feet above the top of the coat in the open core hole from the tint of the annulus and be as possible will be placed and will not be less than the lin accordance with the U	at the required depths will be momains open and if any obstruction he core hole will be cleaned out to collar is not feasible, it will be left in gricultural use, the surface casing the MFGU; and from at least 25 mm the bottom of the core hole to chind perforated intervals, as necessitive of the LBFU-but estimated volume of material recoll Permit.	oved in and set up over the cost are present in the core hole of a depth of at least 100 feet on the hole and perforated as g will be cut at least 5 feet by a feet above the cost feet bgs to 5 feet bgs.  The top of the core hole. Ceressary.	ore hole. e; the presence below the  needed to allow gs and removed. ontact; from at  ment retainers, as the core hole.
attachments a information is	the penalty of law that I have point that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtair	ning the information, I beli	eve that the
Name and Official T	itle (Please type or print)	Signature	)	$\sim$	Date Signed
Dan Johnson	n, VP - General Manage	r	Die	pl	10/3/2019

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

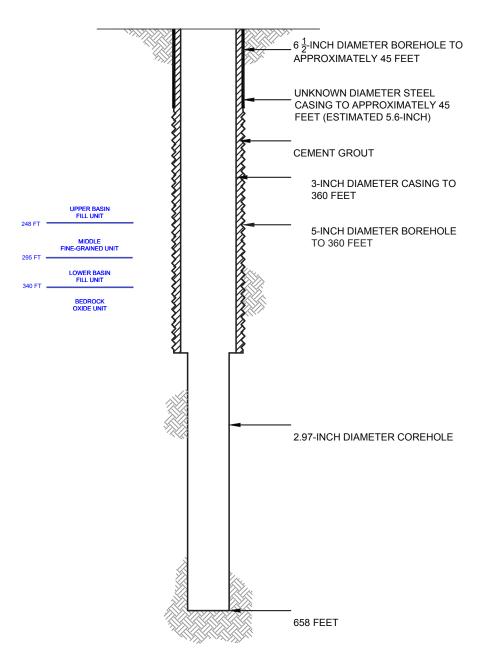
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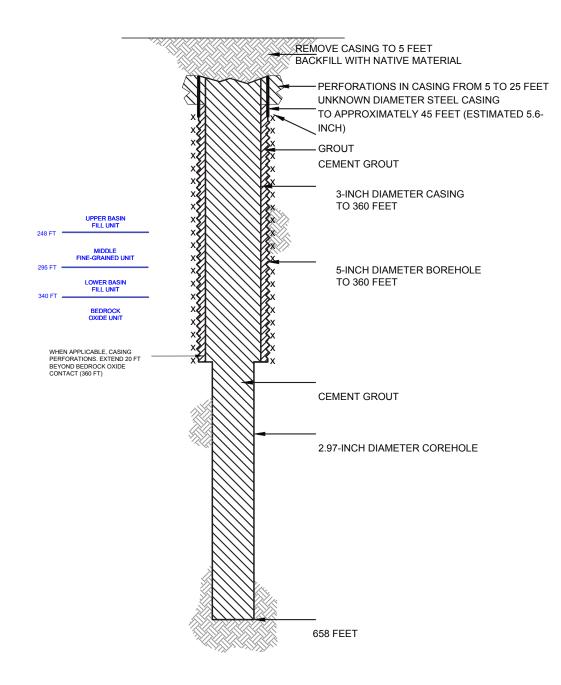
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### **AS-BUILT COREHOLE 6S**



### PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 6S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 6S DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	NID ADANDONNE	_111 /	II I I DAVII	
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,					
Permit or EPA ID Nu	umber	API Number		Full W	ell Name	
R9UIC-AZ3-FY1				11PB		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	rilling unit Latitude 33	.048301	95	
Surface Location						_
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	Longitude -1	11.4260	899	
ft. fro	m (N/S) Line of quarto	er section				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	✓ Notice Prior to Work				Well Rewor	k
Class II	Date Expected to Comme	mce March 2021			Diversion or	ad Abandanmant
✓ Class III					✓ Plugging ar	nd Abandonment
Class V	Report After Work				Conversion	to a Non-Injection Well
	Date Work Ended					
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cell ent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement we, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded are at V cement, or equivalent approved.	abandonment operation depth to which the hole recumented. If necessary, ment seals.  nove it. If removal of the case 25 feet bgs. In areas of each from at least 20 feet beast 20 feet above the top tin the open core hole frout into the annulus and be as possible will be placed and will not be less than the	s at the required depths will be memains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left agricultural use, the surface casin elow the bedrock-LBFU contact to of the MFGU; and from at least 2 om the bottom of the core hole to be be about the bedrock intervals, as need of from 100 feet below the LBFU-be estimated volume of material re	in the hole in the	and set up over the consent in the core hole of at least 100 feet less and perforated as recut at least 5 feet bgs.  20 feet above the constant of the core hole. Cemontact to the top of the	re hole. ; the presence pelow the seeded to allow and removed. htact; from at ent retainers, as e core hole.
attachments a information is	the penalty of law that I have p nd that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	nediately responsible for obtai	ining the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
	n, VP - General Manage		2			10/3/2019
				/		

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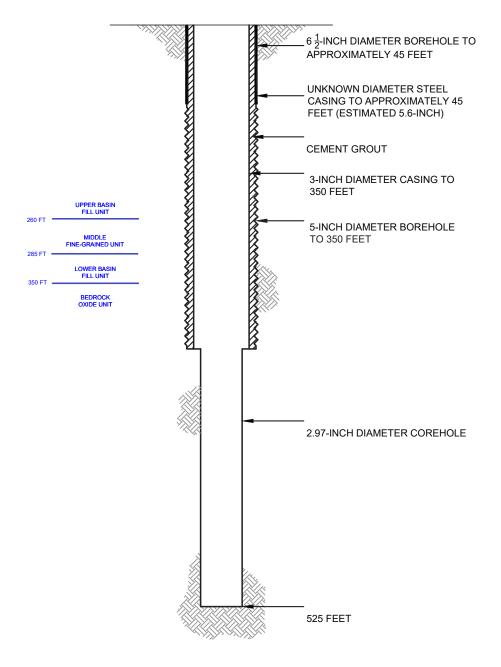
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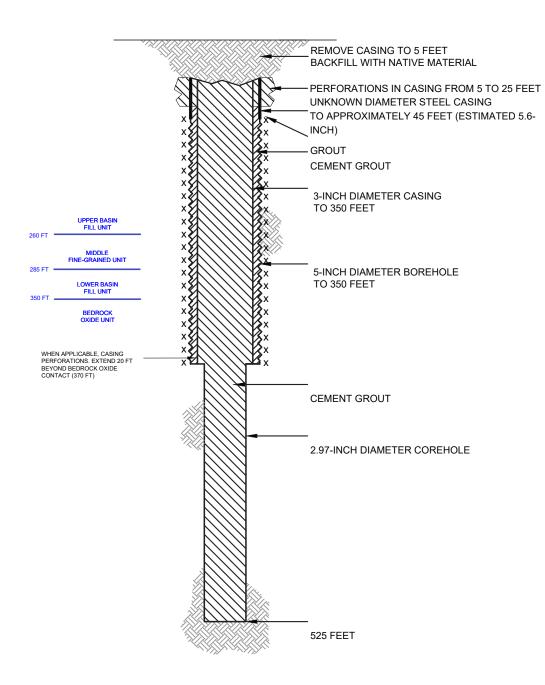
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### **AS-BUILT COREHOLE 11PB**



### PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 11PB**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 11PB DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	<u> </u>	7.112 0111112				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,							
Permit or EPA ID Nu	ımber	API Number			Full V	Vell Name	·	
R9UIC-AZ3-FY1		Arritambol			188	ion riumo		
State			County		100			
Arizona			County Pinal					
Locate well in two	directions from nearest lines of	quarter section a	nd drilling unit	Latitude 33	3.049753	397		
Surface Location								
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E	Longitude _1	11.4305	6647		
	m (N/S) Line of quart							
Well Class	Timing of Action (pick one)					Type of Action (	pick one)	
Class I	✓ Notice Prior to Work					Well Rewor	K	
Class II	Date Expected to Comme	nce March 202	1			/ Diversion or	al Abandanana	
✓ Class III						✓ Plugging ar	d Abandonment	
Class V	Report After Work					Conversion	to a Non-Injection Well	
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Sig	nature				Date Signed	
Dan Johnson	n, VP - General Manage	r		2 mil	Jal .		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

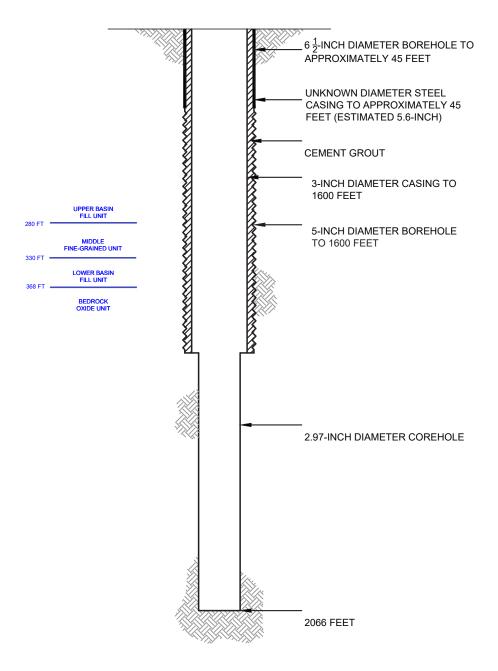
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

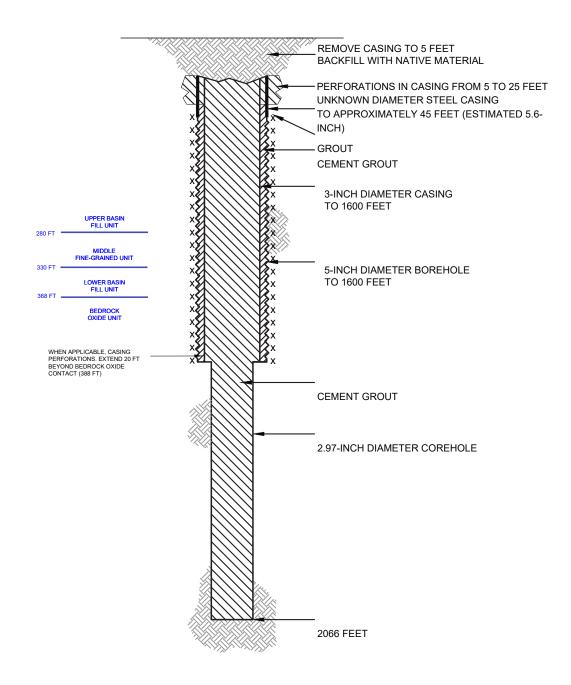
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 18S**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 18S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 18S DIAGRAM



**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132								
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name			
R9UIC-AZ3-FY1	1-1			32MF	7			
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and o	drilling unit Latitude 33	.045567	17			
Surface Location			Longitude	11 4202	90			
NE       1/4 of NW       1/4 of Section       33       Township 4S       Range 9E       Longitude       -111.430389								
ft. from (N/S) Line of quarter section ft. from (E/W) Line of quarter section.								
Well Class	Timing of Action (pick one)				Type of Action (	oick one)		
Class I	<b>√</b> Notice Prior to Work				Well Rework			
Class II	Date Expected to Comme	March 2021			/ Plugging an	d Abandonment		
✓ Class III	Daniel 186				Y i luggilig all			
Class V	Report After Work  Date Work Ended				Conversion	to a Non-Injection Well		
	Date Work Ended							
A workover rig The core hole v and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet be  A tremie pipe v described abov  If the hole has The volume of	Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatu	ire			Date Signed		
Dan Johnson	n, VP - General Manage	r	Dail	God .		10/3/2019		

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**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

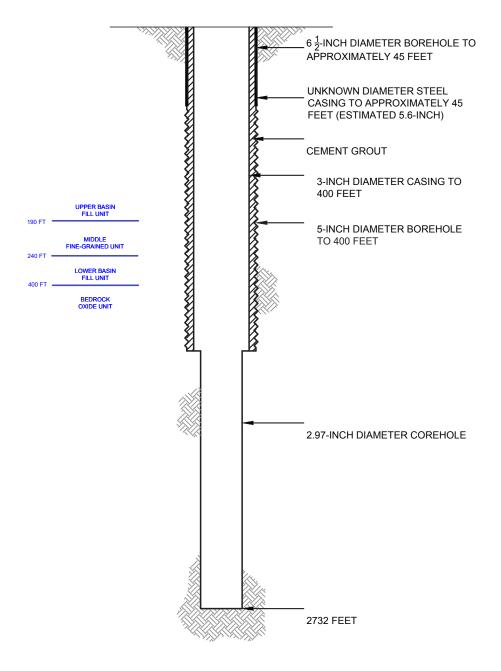
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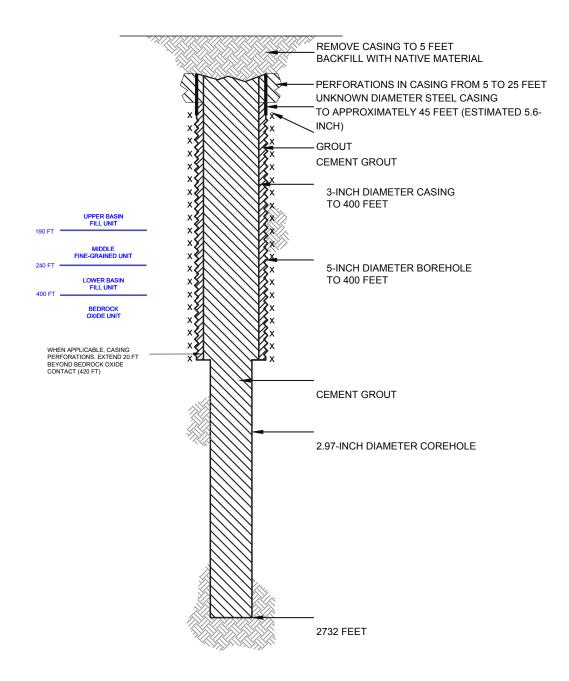
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## **AS-BUILT COREHOLE 32MF**



# PROPOSED PLUGGING AND ABANDONMENT COREHOLE 32MF





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 32MF DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABAILDONNIE	-11 1 /	HIDAVII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,							
Permit or EPA ID Nu	umber	API Number		Full We	ell Name			
R9UIC-AZ3-FY1	1-1			33S				
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.050682	14			
Surface Location								
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.42669	913			
ft. fro	m (N/S) Line of quarto	er section	3. <u>) </u>					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	mce March 2021			/ Blugging or	d Abandonment		
✓ Class III					✓ Fluggilig at	iu Abanuoninent		
Class V	Report After Work		_		Conversion	to a Non-Injection Well		
	Date Work Ended							
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	n, VP - General Manage		2 mil	()		10/3/2019		
				/				

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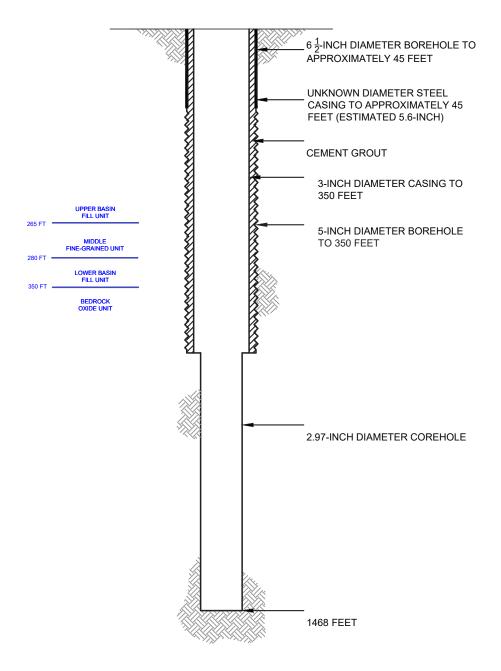
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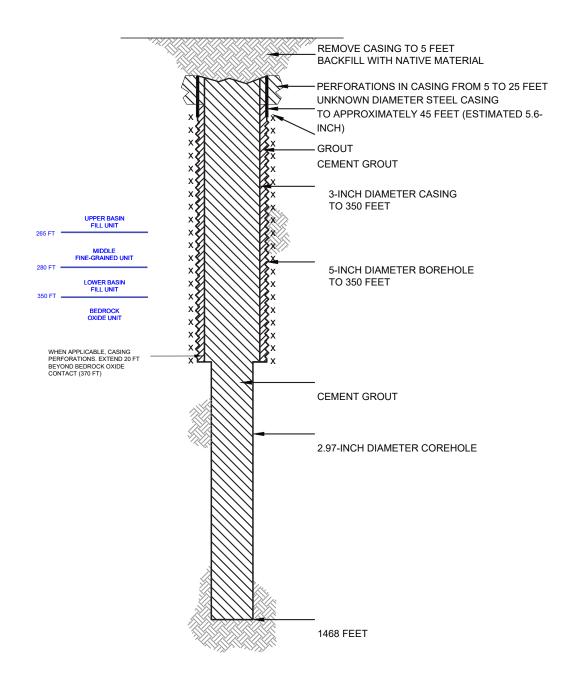
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## **AS-BUILT COREHOLE 33S**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 33S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

**COREHOLE 33S DIAGRAM** 



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	, , , , , , , , , , , , , , , , , , ,							
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,									
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·				
R9UIC-AZ3-FY1		ATTRUMBU		45S	ion italiio					
State			County	.00						
Arizona			Pinal							
Locate well in two o	directions from nearest lines of	quarter section an	d drilling unit Latitude 33	3.052176	591					
NE 1/4 of SV	V 1/4 of Section 28	Township 4S	Range 9E Longitude _1	11.4302	.923					
	ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	pick one)				
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Commence March 2021  Report After Work  Date Work Ended  Well Rework  Plugging and Abandonment  Conversion to a Non-Injection We									
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Name and Official T	itle (Please type or print)	Signa	ature			Date Signed				
	n, VP - General Manage		Dail	Grand Contraction of the Contrac		10/3/2019				

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

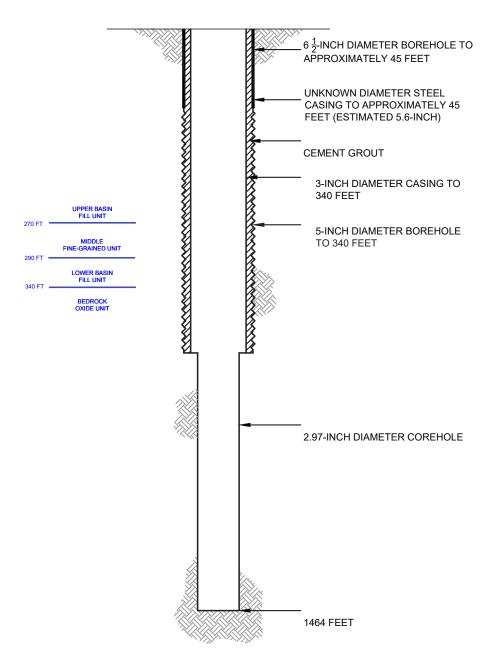
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

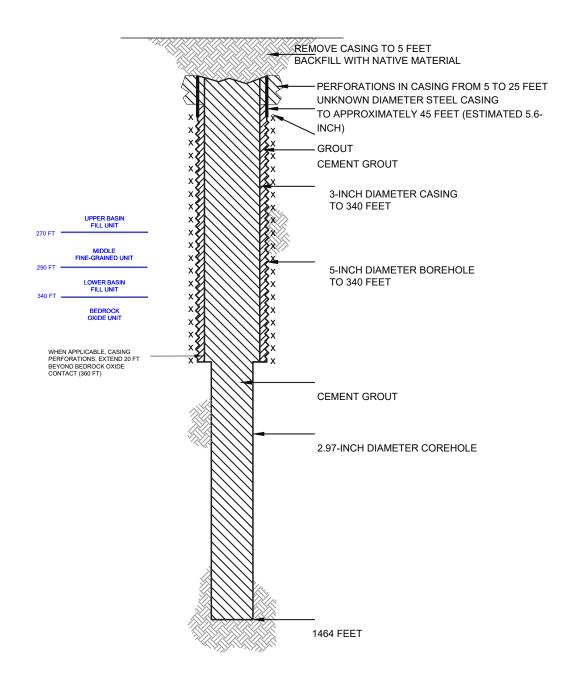
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 45S**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 45S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 45S DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	NID ADANDONNE	_111 /-	ALLIDAVII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,							
Permit or EPA ID Nu	umber	API Number		Full W	ell Name			
R9UIC-AZ3-FY1	1-1			46				
State			County					
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section and dr	rilling unit Latitude 33	.053408	371			
Surface Location						_		
SW 1/4 of NI	1/4 of Section 28	Township 4S Ra	ange 9E Longitude -1	11.4281	494			
ft. fro	m (N/S) Line of quarto	er section	- 12					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)		
Class I	✓ Notice Prior to Work				Well Rewor	k		
Class II	Date Expected to Comme	mce March 2021			Diversing a	ad Abandanmant		
✓ Class III					✓ Plugging al	nd Abandonment		
Class V	Report After Work				Conversion	to a Non-Injection Well		
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed		
	n, VP - General Manage		2	()		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

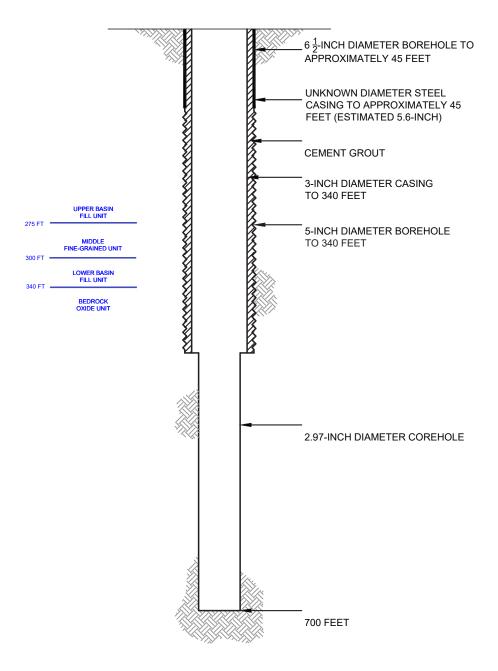
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

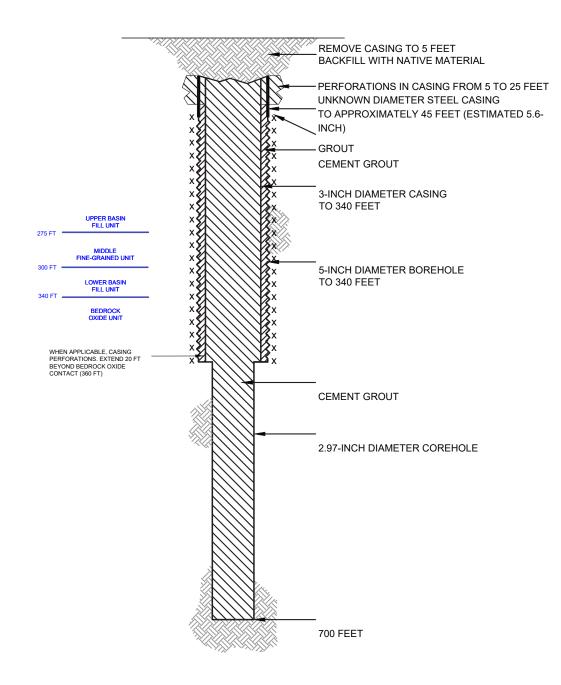
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 46**



# PROPOSED PLUGGING AND ABANDONMENT COREHOLE 46





FLORENCE COPPER, INC. FLORENCE, ARIZONA

**COREHOLE 46 DIAGRAM** 



FIGURE 1

**ŞEPA** 

United States Environmental Protection Agency

Name and Address, F	Name and Address, Phone Number and/or Email of Permittee								
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132									
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name				
R9UIC-AZ3-FY1	1-1			47S					
State			County						
Arizona			Pinal						
Locate well in two	directions from nearest lines o	f quarter section and d	rilling unit Latitude 33	.052191	18				
Surface Location			Laurette de		22.5				
NW 1/4 of SE	1/4 of Section 28	Township 4S R	ange 9E Longitude -1	11.4281	235				
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	oick one)			
Class I	√ Notice Prior to Work				Well Rework	(			
Class II	Date Expected to Commo	March 2021			/ Plugging an	d Abandonment			
✓ Class III					V Trugging un	a Abandonnient			
Class V	Report After Work  Date Work Ended				Conversion	to a Non-Injection Well			
	Date Work Elided								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signatui	re			Date Signed			
Dan Johnson	n, VP - General Manage	Pr	Dail	Cole Cole		10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

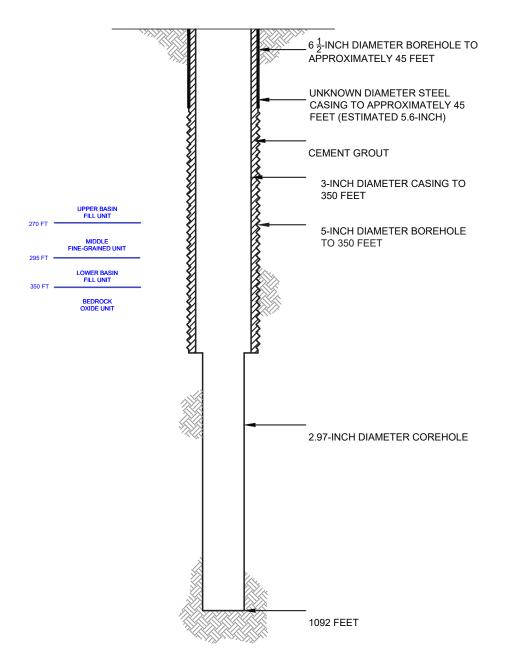
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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

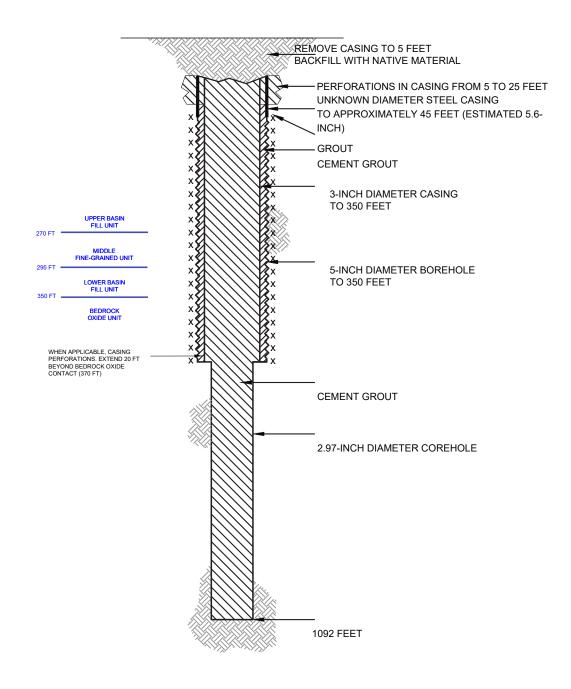
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## **AS-BUILT COREHOLE 47S**



# PROPOSED PLUGGING AND ABANDONMENT COREHOLÊ 47S





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 47S DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of Po	ermittee	IND ABANDONNIE	-111 /	HIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,						
Permit or EPA ID Nu	umber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1				51S			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0501083	33		
Surface Location	4/4 of Castian Co	Tournahin 10 Pa	Longitude -11	11.43711	128	_ _	
NW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E				
	m (N/S) Line of quarte						
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	mce March 2021			Z Blooming on	ad Albandannant	
✓ Class III					✓ Plugging ar	nd Abandonment	
Class V	Report After Work		_		Conversion	to a Non-Injection Well	
	Date Work Ended						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.							
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Name and Official T	itle (Please type or print)	Signature	9			Date Signed	
	n, VP - General Manage	r	2 mil	Colonia de la co		10/3/2019	
				,			

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

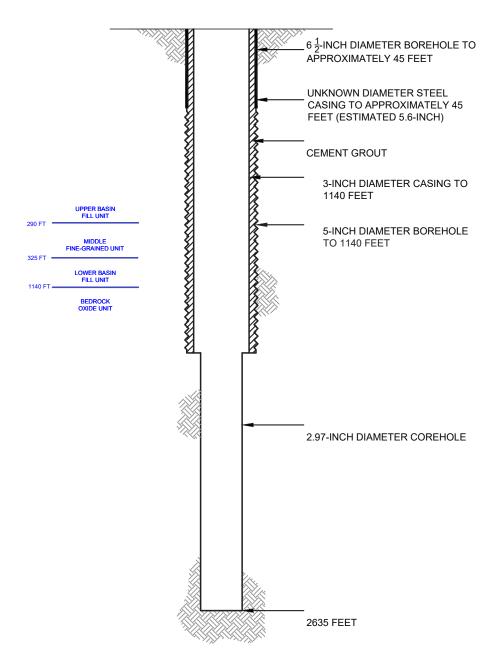
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

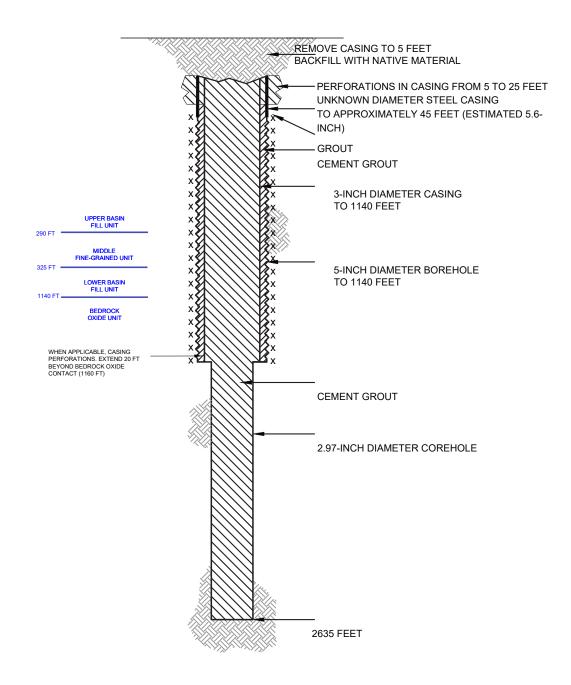
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 51S**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 51S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 51S DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABANDONNIE	-111 /	HIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	STITINGS.					
Permit or EPA ID No	umber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1				52S			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0521954	49		
Surface Location							
NW 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.42570	031		
ft. fro	m (N/S) Line of quarto	er section	0 75				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	✓ Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	mce March 2021			Z Diversion or	ad Abandanasas	
✓ Class III					✓ Plugging ar	nd Abandonment	
Class V	Report After Work		_		Conversion	to a Non-Injection Well	
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet be  A tremie pipe with described abov  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cell ent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement ve, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	abandonment operations depth to which the hole re cumented. If necessary, the ment seals.  The control of the c	s at the required depths will be mmains open and if any obstruction he core hole will be cleaned out to ollar is not feasible, it will be left in agricultural use, the surface casing blow the bedrock-LBFU contact to of the MFGU; and from at least 20 mm the bottom of the core hole to be will be bedrocked intervals, as necessary and the surface casing the surface of the bedrom of the core hole to be will from 100 feet below the LBFU-be sestimated volume of material research.	oved in an an are pre- to a depth in the hole and will be concept at least 2 25 feet bgs the top of cessary.	and set up over the co sent in the core hole of at least 100 feet the e and perforated as nout at least 5 feet bgs 20 feet above the core to 5 feet bgs.	re hole. ; the presence pelow the seeded to allow and removed. htact; from at sent retainers, as see core hole.	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	9			Date Signed	
	n, VP - General Manage	r	2 and	GAL.		10/3/2019	
				*			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

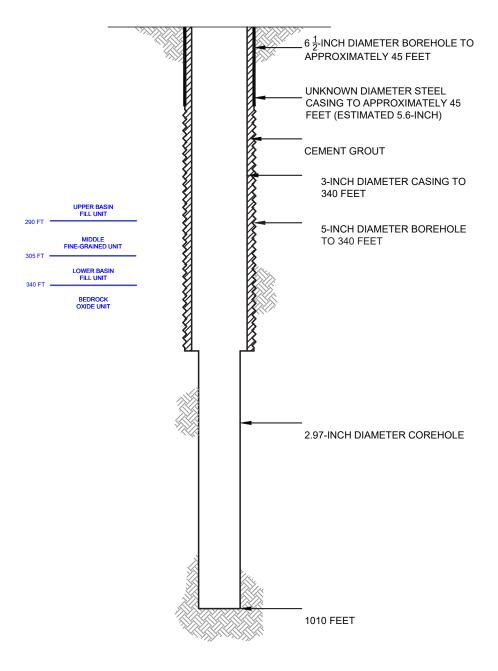
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

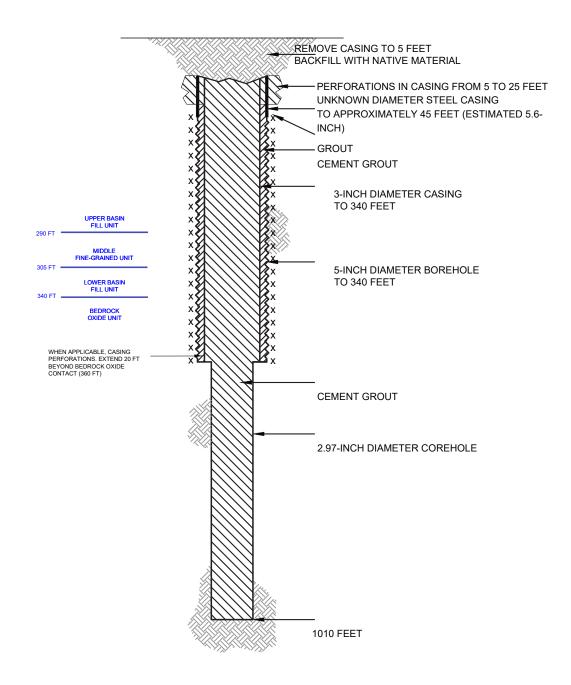
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 52S**



# PROPÖSED PLUGGING AND ÅBANDONMENT COREHOLE 52S





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 52S DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	7.1.12 7.127 11.12 01.11.11				
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	у,						
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·	
R9UIC-AZ3-FY1		Airitamboi		55MF			
State			County	001/11			
Arizona			Pinal				
Surface Location  NE 1/4 of NV  ft. from	m (N/S) Line of quart	Township 4S	Latitude 33	3.045006 11.4338			
	m (E/W) Line of quart	er section.			Tune of Action	niak ana)	
Class I  Class II  Class III  Class V	Well Rework  Date Expected to Commence March 2021  ✓ Plugging and Abandonment  Report After Work						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed. If the collar cannot be removed, it will be perforated from at least 20 feet blow the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signa	ture			Date Signed	
Dan Johnson	n, VP - General Manage	r	Dail	Grand Contraction of the Contrac		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

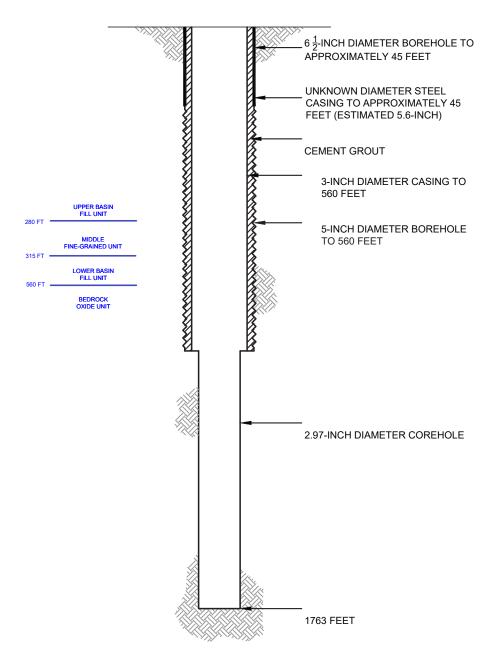
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

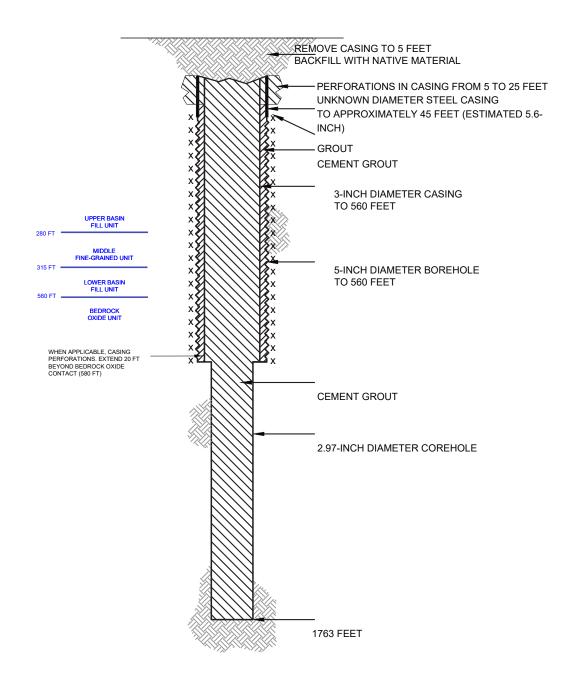
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 55MF**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 55MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 55MF DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of Po	ermittee				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project					
Permit or EPA ID Nu	umber	API Number		Full We	ell Name	
R9UIC-AZ3-FY1	1-1			56MF		
State			County			
Arizona			Pinal			
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.047502	13	
Surface Location SW 1/4 of SE	1/4 of Section 28	Township $4{ m S}$ Ra	nge 9E Longitude -1	11.42567	77942	
	m (N/S) Line of quarte					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I	Notice Prior to Work  Date Expected to Comme	nce March 2021			Well Rewor	k
J Class III					✓ Plugging ar	nd Abandonment
Class III	Report After Work				Conversion	to a Non-Injection Well
Class V	Date Work Ended					
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet be  A tremie pipe with described abov  If the hole has The volume of	capable of performing the required will be inspected to determine the configuration of any existing collar will also be do contact to enable placement of cerent, an attempt will be made to remail to be placed to a depth of at least most be removed, it will be perforate elow the base of the MFGU to at least will be used to place Type V cement we, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved	abandonment operations lepth to which the hole re cumented. If necessary, the ment seals.  Index is a seal of the control of t	s at the required depths will be memains open and if any obstruction he core hole will be cleaned out to collar is not feasible, it will be left in agricultural use, the surface casing allow the bedrock-LBFU contact to of the MFGU; and from at least 20 common the bottom of the core hole to be chind perforated intervals, as need if from 100 feet below the LBFU-bet estimated volume of material results.	oved in ar ns are pre to a depth in the hole ng will be o o at least 2 5 feet bgs the top of cessary.	and set up over the consent in the core hole of at least 100 feet less and perforated as rout at least 5 feet bgs.  20 feet above the core to 5 feet bgs.  If the core hole. Cemontact to the top of the	re hole. ; the presence pelow the seeded to allow and removed. htact; from at ent retainers, as e core hole.
attachments a information is	the penalty of law that I have pond that, based on my inquiry of true, accurate, and complete. fine and imprisonment. (Ref. 40	ersonally examined and those individuals imm I am aware that there a	ediately responsible for obtain	ning the	information, I belie	eve that the
Name and Official T	itle (Please type or print)	Signature	9			Date Signed
Dan Johnson	n, VP - General Manage	r	Dail	S		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the **WELL CLASS**, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

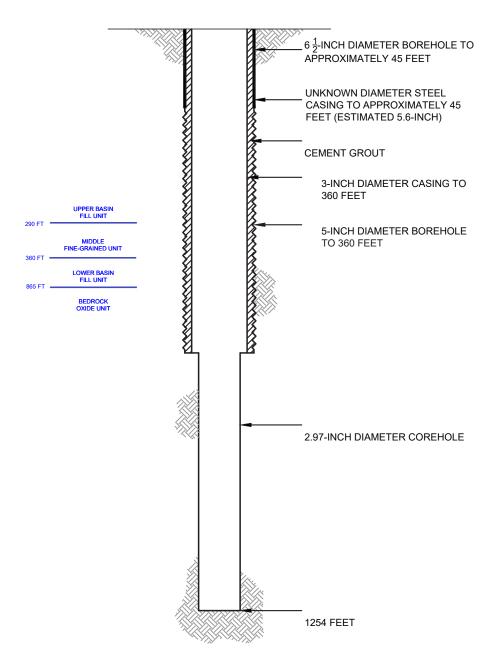
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

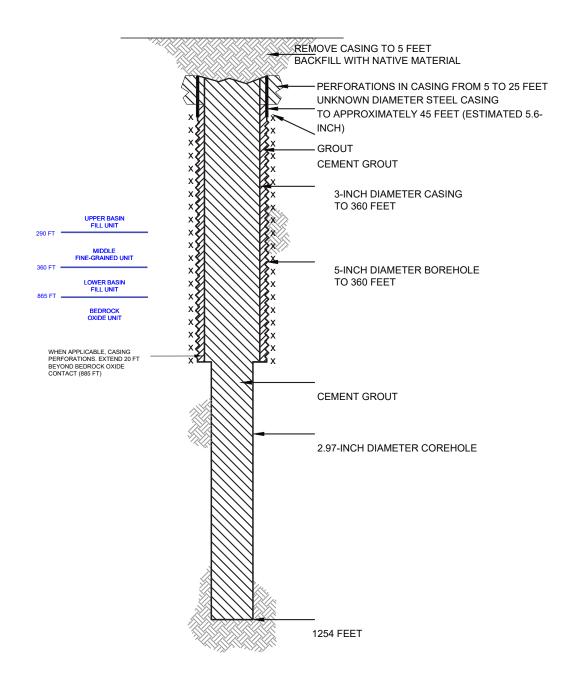
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 56MF**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 56M**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 56MF DIAGRAM



United States Environmental Protection Agency

Name and Address, P	hone Number and/or Email of P	ermittee	, ,,				
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	,						
Permit or EPA ID Nu	mber	API Number		Full W	/ell Name	·	
R9UIC-AZ3-FY11		Airitamboi		60MF			
State	1		County	001/11			
Arizona			Pinal				
Surface Location  NE 1/4 of NV  ft. from	/ 1/4 of Section 33  In (N/S) Line of quarter (E/W) Line of quarter	Township $4{ m S}$	C Latitude 33	3.043811 11.4314			
	,				Tune of Action (	nick one)	
Class II  Class III  Class IV	Well Rework  Date Expected to Commence March 2021  Plugging and Abandonment  Report After Work  Conversion to a Non Injection Well						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Ti	tle (Please type or print)	Signat	ure			Date Signed	
	, VP - General Manage		Dail	Grand Contraction of the Contrac		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

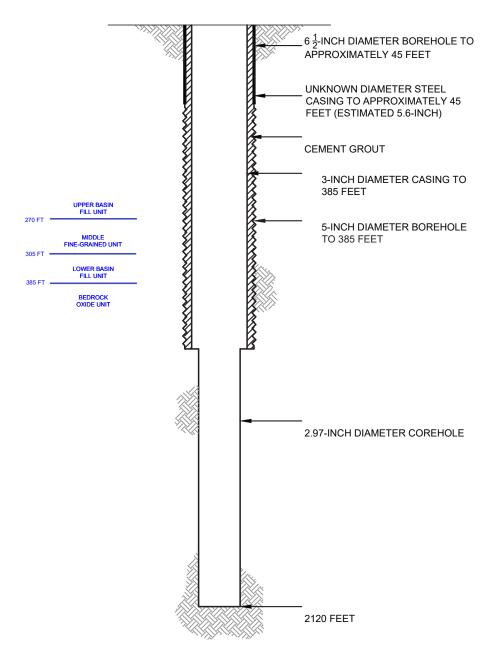
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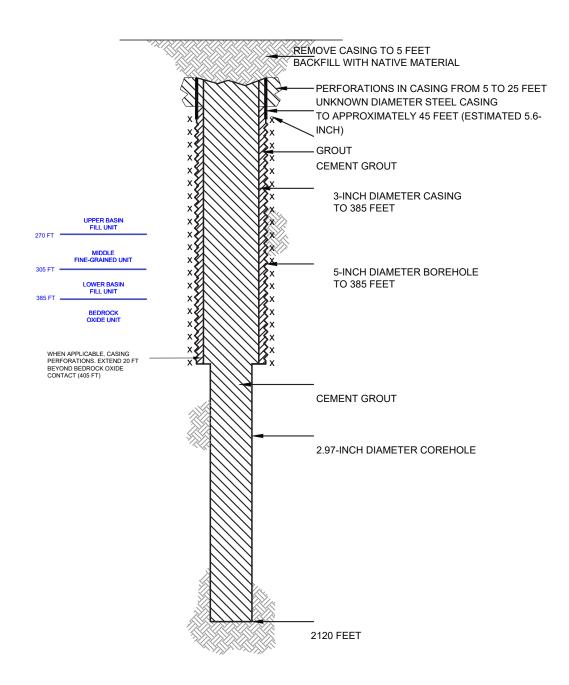
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 60MF**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 60MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 60MF DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,									
Permit or EPA ID Nu	ımber	API Number				Full W	/ell Name			
R9UIC-AZ3-FY1		Airitamboi				62MF				
State				County		021111				
Arizona				Pinal						
Surface Location SW 1/4 of SE	1/4 of Section 28	Township $4\mathrm{S}$		illing unit	Latitude 33. Longitude -11	.048555 11.4281				
	ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)						Type of Action (	pick one)		
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Commence March 2021  Report After Work  Date Work Ended  Well Rework  Plugging and Abandonment  Conversion to a Non-Injection Wel						d Abandonment			
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.										
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Name and Official T	itle (Please type or print)	Si	gnatur	e	3			Date Signed		
	n, VP - General Manage				Dail (	John		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

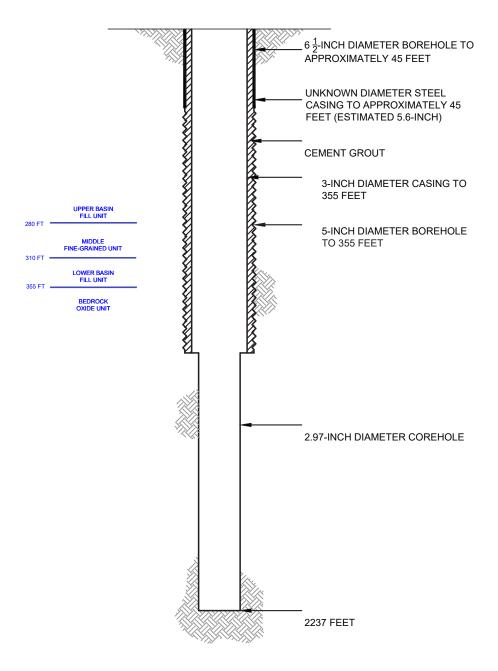
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

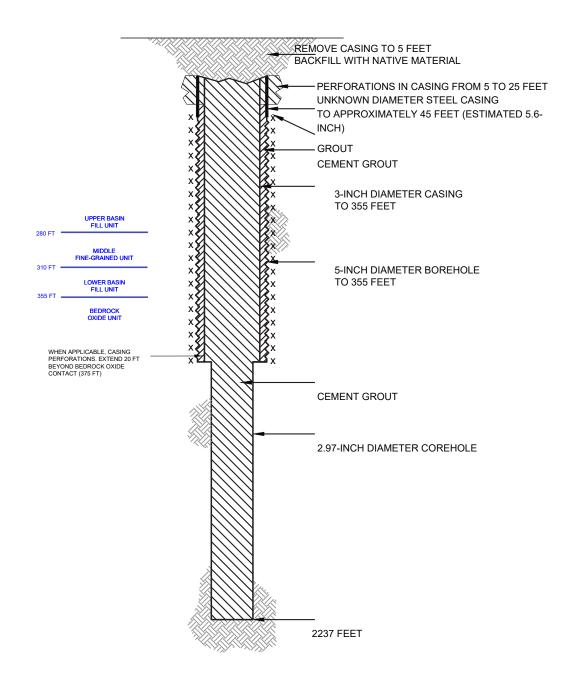
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 62MF**



# PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 62MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 62MF DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,									
Permit or EPA ID Nu	ımber	API Number				Full V	Vell Name	·		
R9UIC-AZ3-FY1		- Al Titaliisoi				67S	ion riumo			
State				County		0,0				
Arizona				Pinal						
Surface Location  NW 1/4 of SE	directions from nearest lines of	quarter section		illing unit	Latitude 33 Longitude -11	.05000 11.4289				
ft. fro	ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.  Type of Action (nick one)									
Well Class	Timing of Action (pick one)						Type of Action (	pick one)		
Class II  Class III  Class V	✓ Notice Prior to Work Well Rework   Date Expected to Commence March 2021   ✓ Plugging and Abandonment   Date Work Ended    Conversion to a Non-Injection Well						d Abandonment			
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.										
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Name and Official T	itle (Please type or print)	Si	ignatur	e				Date Signed		
	n, VP - General Manage				Dail!	Cyl.		10/3/2019		

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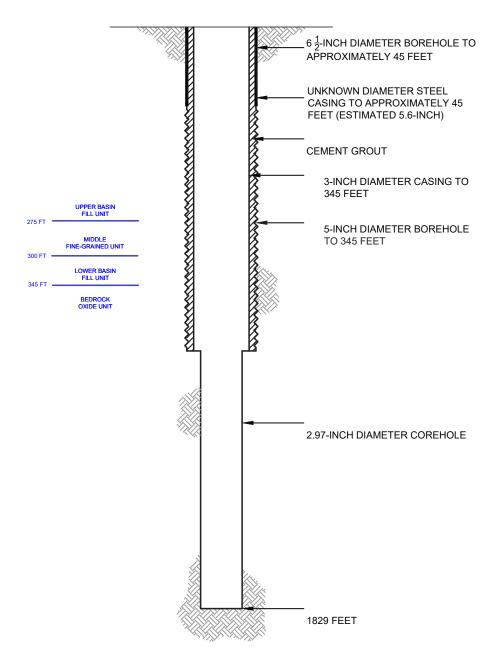
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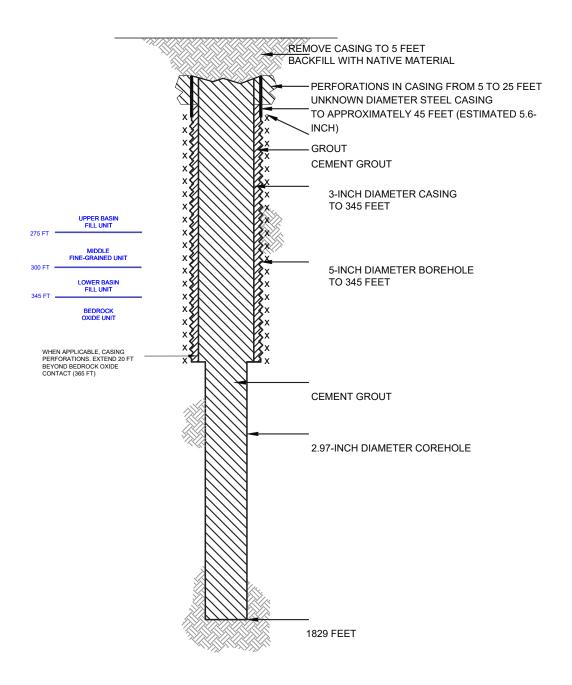
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### **AS-BUILT COREHOLE 67S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 67S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 67S DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	, ,						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,								
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·			
R9UIC-AZ3-FY1		Airitamboi		68MF					
State			County	001/11					
Arizona			Pinal						
Surface Location SW 1/4 of SE	1/4 of Section 28	Township 4S	c Lantude 33	3.046197 11.4281					
ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	pick one)			
Class II  Class III  Class V	Class II  Class II  Class III  Report After Work  Conversion to a Non Injection W								
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Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signat	ure	~		Date Signed			
	n, VP - General Manage		Dail	John		10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

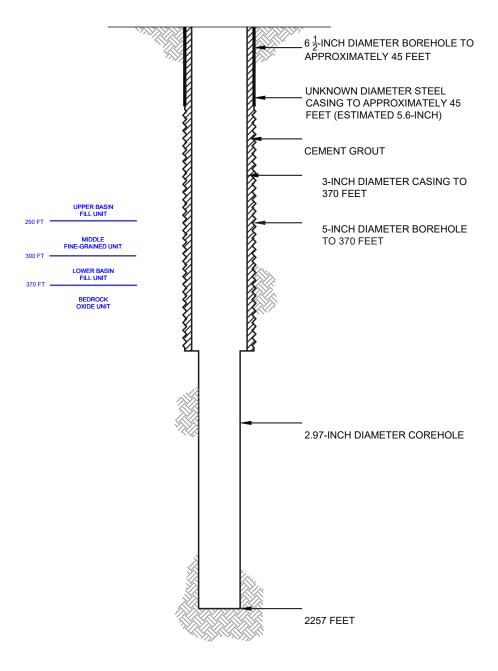
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

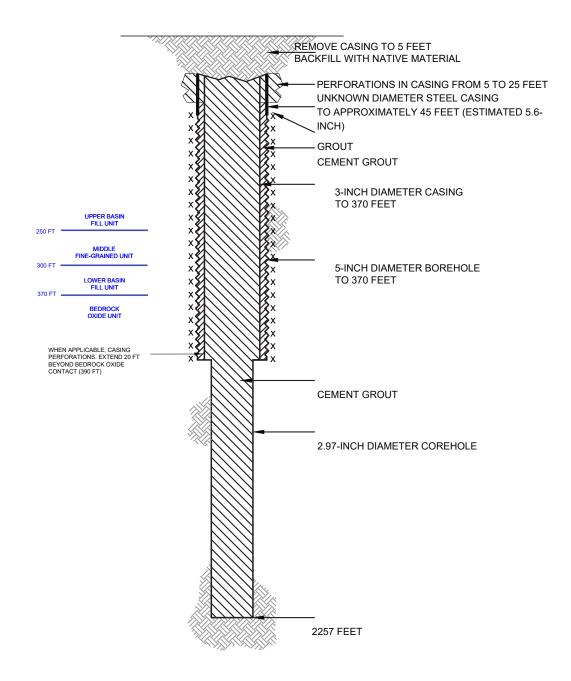
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 68MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 68MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 68MF DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	7.1.12 7.127.11.12 0.11.11.1								
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,										
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·					
R9UIC-AZ3-FY1		ATTRAME		69MF							
State			County	071111							
Arizona			Pinal								
Surface Location  SE 1/4 of SE	directions from nearest lines of	quarter section and $ \label{eq:township} \text{Township} \boxed{4s} $	Latitude 33	3.046145 11.4248							
	ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.  Well Class Timing of Action (pick one)  Type of Action (pick one)										
Well Class	Timing of Action (pick one)				Type of Action (	pick one)					
Class II  Class III  Class V	Date Expected to Commence March 2021  Plugging and Abandonment  Report After Work  Conversion to a Non Injection We										
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.											
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)											
Name and Official T	itle (Please type or print)	Signa	ture			Date Signed					
Dan Johnson	n, VP - General Manage	r	Doil	Grand Contraction of the Contrac		10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

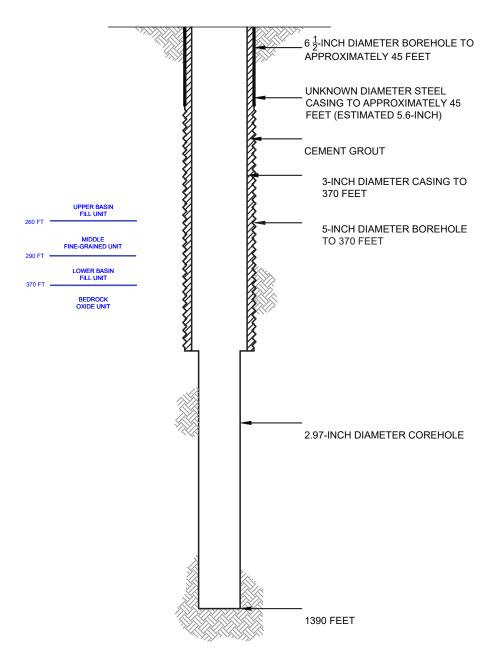
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

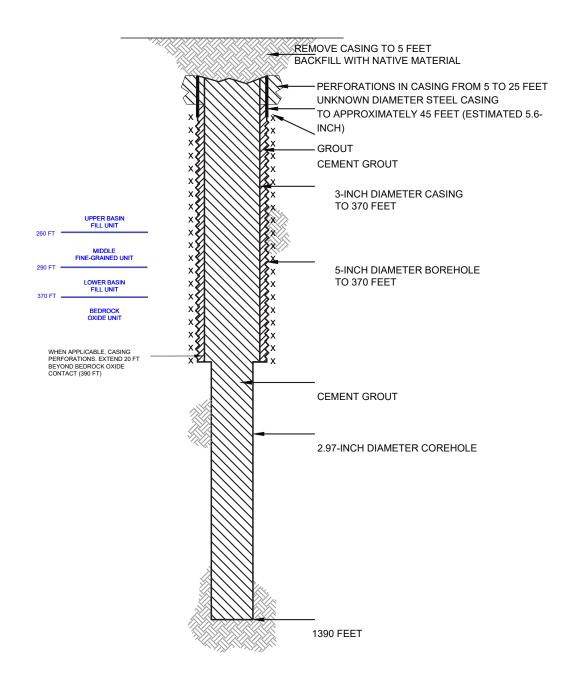
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 69MF**



## PROPOSED PLUGGING AND ABANDONMENT COREHOLE 69MF





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 69MF DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	-111	IIIDAVII				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,								
Permit or EPA ID Nu	umber	API Number		Full We	II Name				
R9UIC-AZ3-FY1				70MF					
State			County						
Arizona			Pinal						
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0485338	33				
Surface Location									
SE 1/4 of SE	1/4 of Section 28	Township 4S Ra	nge 9E Longitude -11	11.42487	62				
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	pick one)			
Class I	✓ Notice Prior to Work				Well Rework	k			
Class II	Date Expected to Comme	nce March 2021							
✓ Class III					✓ Plugging an	d Abandonment			
Class V	Report After Work				Conversion	to a Non-Injection Well			
	Date Work Ended								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signature	9			Date Signed			
	n, VP - General Manage	r	2 mil	John	_	10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

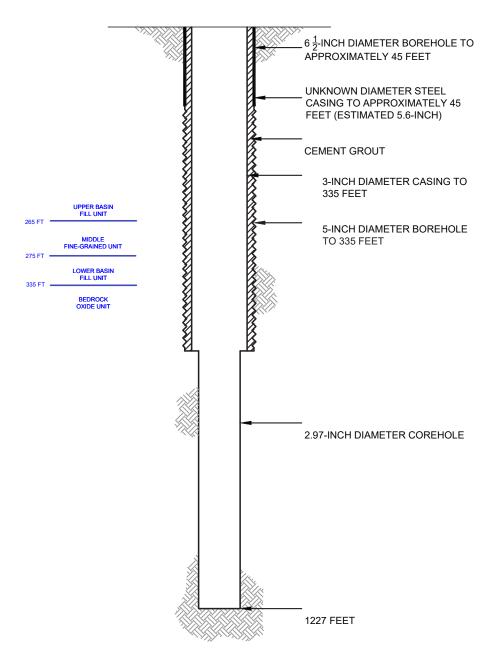
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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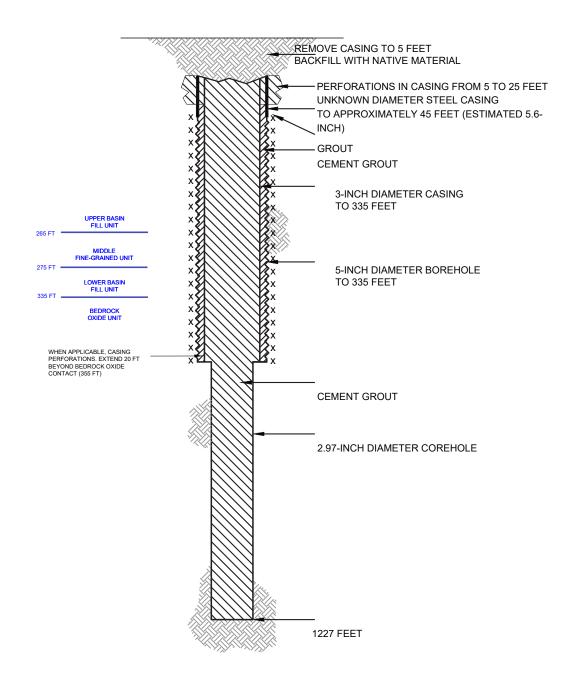
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 70MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 70MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 70MF DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address, P	hone Number and/or Email of P	ermittee						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	,							
Permit or EPA ID Nu	mber	API Number				Full W	Vell Name	·
R9UIC-AZ3-FY11		ATTAMINOT				80S	ion numo	
State				County		002		
Arizona				Pinal				
Surface Location NW 1/4 of SW	7 1/4 of Section 28 In (N/S) Line of quarter (E/W) Line of quarter	Township 4S	_	J	Latitude 33.	.052147		
	Timing of Action (pick and)						Tours of Antion (	winter a way
Class II  Class III  Class V	Class II  Class III  Plugging and Abandonment  Conversion to a Non Injection I							k nd Abandonment
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Sig	gnature	)		_		Date Signed
	n, VP - General Manage				Dail (	()		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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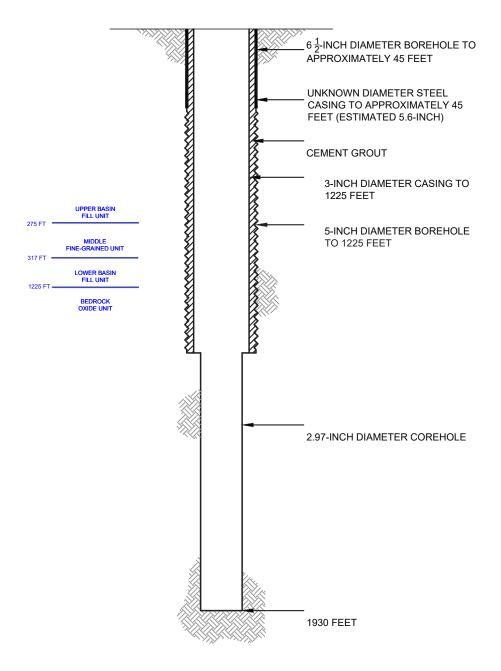
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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

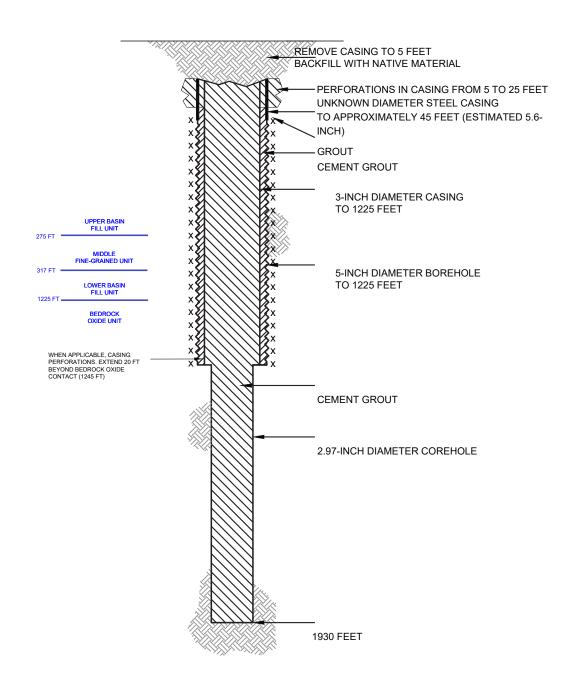
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 80S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 80S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 80S DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	<u> </u>					
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,							
Permit or EPA ID Nu	ımber	API Number			Full W	Vell Name	·	
R9UIC-AZ3-FY1		7. Trumbor			918	ion riumo		
State			County		710			
Arizona			Pinal					
Locate well in two	directions from nearest lines of	quarter section	and drilling unit	Latitude 33	3.049728	87		
Surface Location								
NE 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E	Longitude _1	11.4240	)524		
ft. fro	m (N/S) Line of quart	er section						
Well Class	Timing of Action (pick one)					Type of Action (	pick one)	
Class I	✓ Notice Prior to Work					Well Rewor	K	
Class II	Date Expected to Comme	nce March 202	1			/ Diversion or	al Abandanana	
✓ Class III						✓ Plugging ar	d Abandonment	
Class V	Report After Work					Conversion	to a Non-Injection Well	
	Date Work Ended							
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Sig	ınature				Date Signed	
Dan Johnson	n, VP - General Manage	r		2 mil	Sel		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

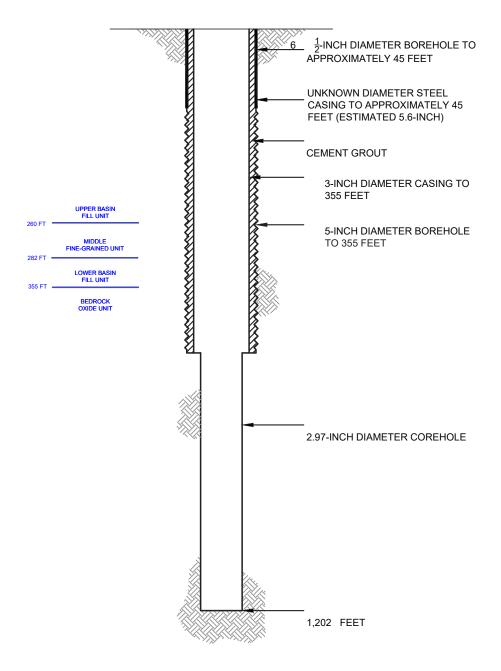
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

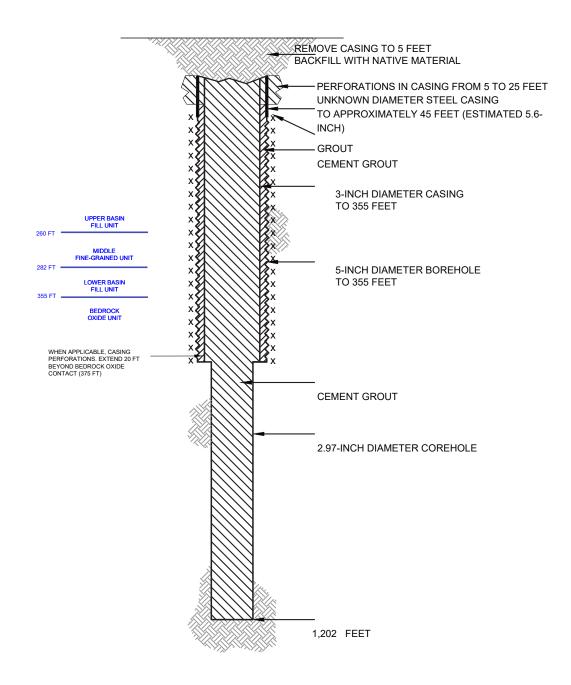
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 91S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 91S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 91S DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee						
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,							
Permit or EPA ID Nu	ımber	API Number				Full W	/ell Name	·
R9UIC-AZ3-FY1		Airitamboi				92S	ion riumo	
State				County		720		
Arizona				Pinal				
Surface Location	directions from nearest lines of	quarter section  Township 4S			Latitude 33.	.049734 11.4256		
	m (N/S) Line of quart	er section	Ra	nge 9E				
Well Class	Timing of Action (pick one)						Type of Action (	pick one)
Class II  Class III  Class V	Class II  Class III  Report After Work  Conversion to a Non Injection W							d Abandonment
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official T	itle (Please type or print)	Si	gnature	е				Date Signed
	n, VP - General Manage				Dail	John Marie Company		10/3/2019

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

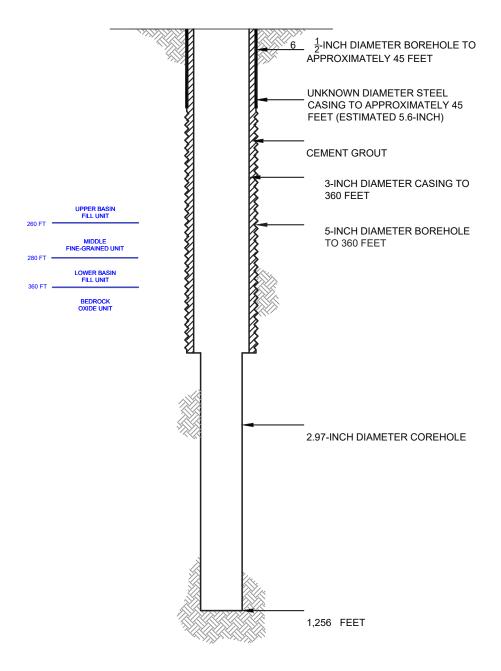
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

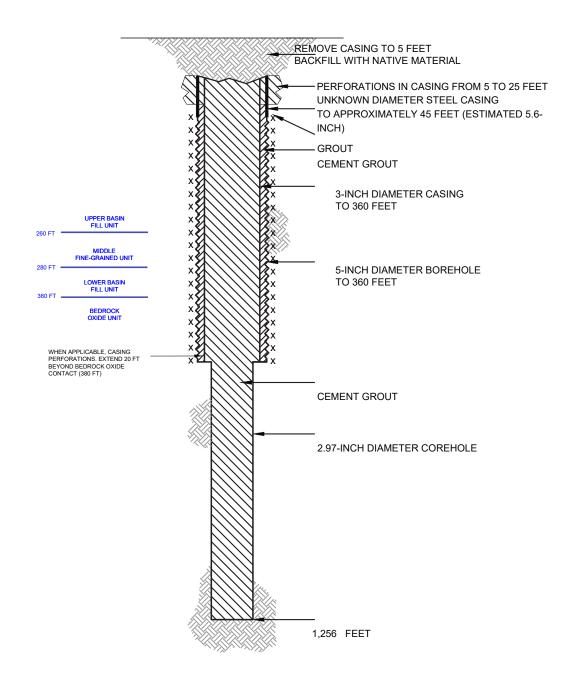
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 92S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 92S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 92S DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	NI ADANDONNE	-111 /	MI I IDAVII				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,								
Permit or EPA ID Nu	umber	API Number		Full W	ell Name				
R9UIC-AZ3-FY1	1-1			92SA					
State			County						
Arizona			Pinal						
Locate well in two	directions from nearest lines of	quarter section and di	rilling unit Latitude 33	.049997	8				
Surface Location						_			
NW 1/4 of SE	1/4 of Section 28	Township 4S R	Longitude -11	11.42579	992				
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	pick one)			
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k			
Class II	Date Expected to Comme	mce March 2021			Diversion of	ad Abandanmant			
✓ Class III					✓ Plugging a	nd Abandonment			
Class V	Report After Work				Conversion	to a Non-Injection Well			
	Date Work Ended								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed. If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signatur	re			Date Signed			
	n, VP - General Manage		Dail	()		10/3/2019			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

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Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

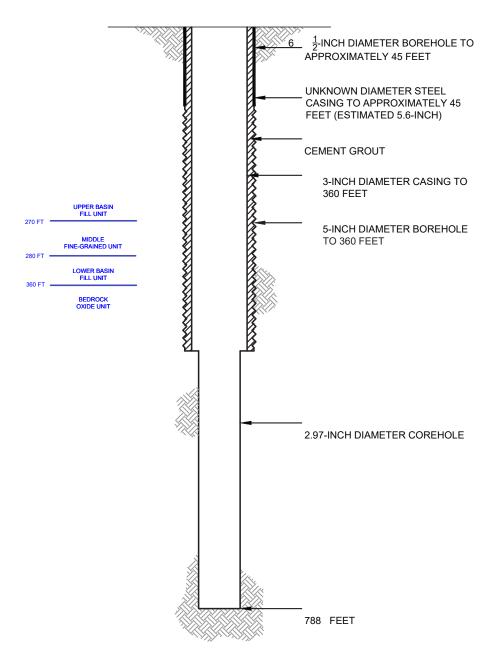
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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

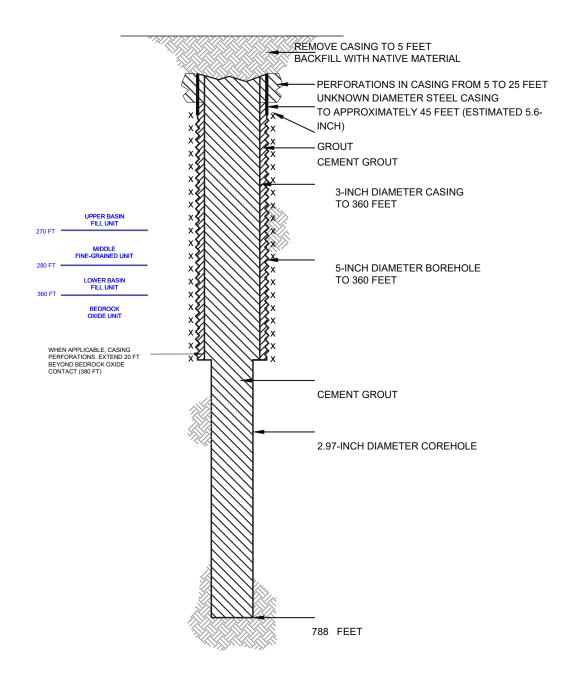
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 92SA**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 92SA**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 92SA DIAGRAM



**ŞEPA** 

United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee									
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132									
Permit or EPA ID No	ımber	API Number		Full W	/ell Name				
R9UIC-AZ3-FY1	1-1			93S					
State			County						
Arizona			Pinal						
Locate well in two	directions from nearest lines of	quarter section and	drilling unit Latitude 33	.049739	957				
Surface Location			l amatemata d		00.5				
NW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.4273	035				
ft. from (N/S) Line of quarter section ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	oick one)			
Class I	<b>√</b> Notice Prior to Work				Well Rework	(			
Class II	Date Expected to Comme	March 2021			/ Plugging an	d Abandonment			
✓ Class III	_				Y Flugging an	u Abandoninent			
Class V	Report After Work				Conversion	to a Non-Injection Well			
	Date Work Ended								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signatu	ire			Date Signed			
	n, VP - General Manage		Dail	()		10/3/2019			

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

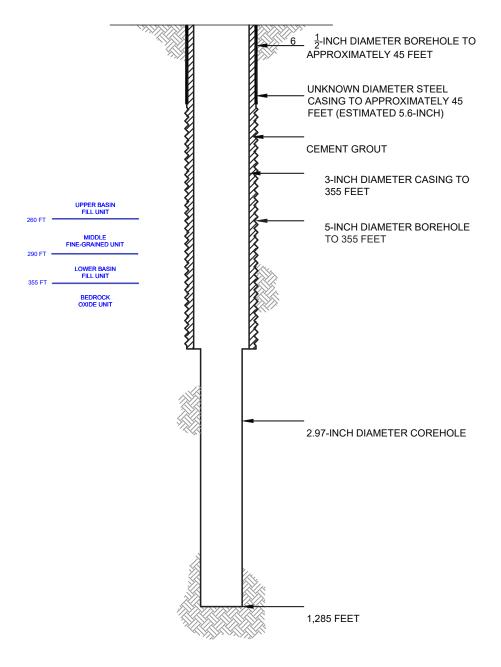
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

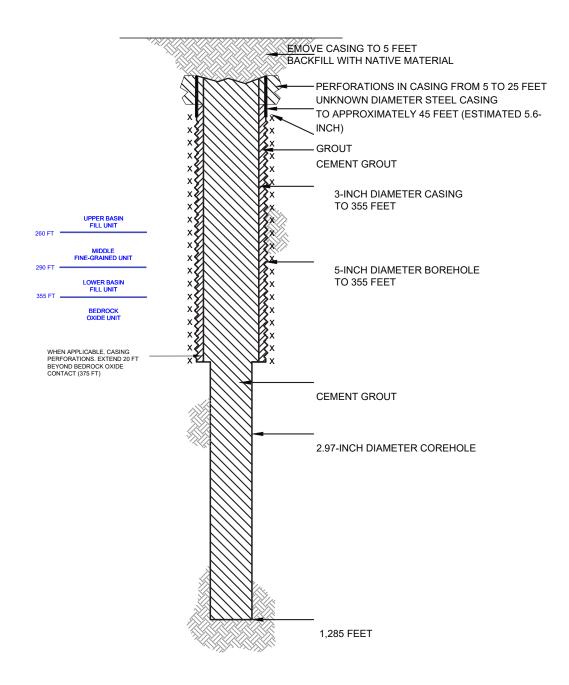
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 93S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 93S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 93S DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	AID ABAILDONNE	_11 /	NI I IDAVII				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	el lintee							
Permit or EPA ID Nu	umber	API Number		Full W	ell Name				
R9UIC-AZ3-FY1		ATTRUMBU		96S	cii italiic				
State	1-1			703					
Arizona			Pinal						
	directions from nearest lines of	quarter section and d	rilling unit Latitude 33	.052297	753				
Surface Location			Longitude _1	11.4338	17				
NE 1/4 of SV	1/4 of Section 28	Township 4S R	ange 9E			_			
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	pick one)			
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k			
Class II	Date Expected to Comme	nce March 2021							
✓ Class III					✓ Plugging ar	nd Abandonment			
Class V	Report After Work				Conversion	to a Non-Injection Well			
Oluss V	Date Work Ended								
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.									
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)									
Name and Official T	itle (Please type or print)	Signatui	re			Date Signed			
	n, VP - General Manage		2	()		10/3/2019			
				/					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

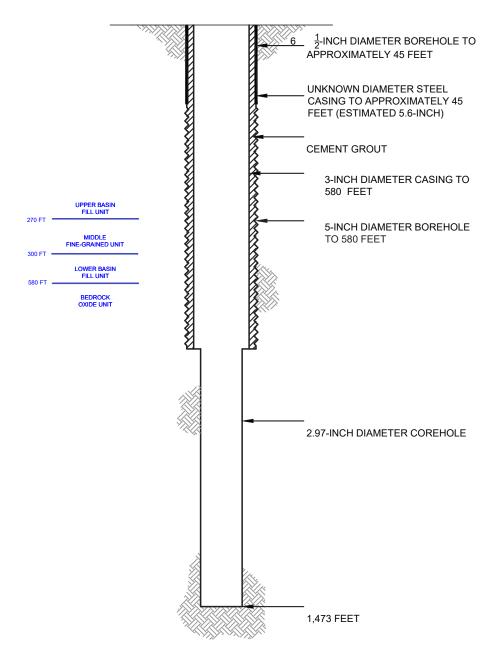
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

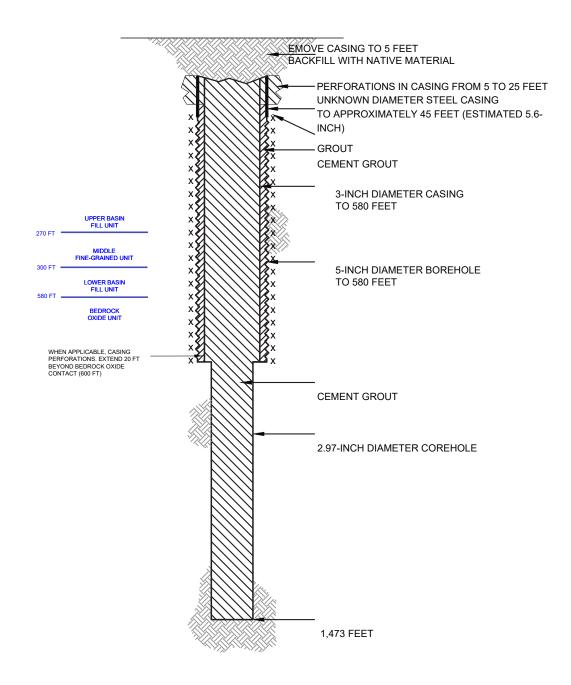
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 96S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 96S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 96S DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	AID ABAILDOINIL	_111 /	HIDAVII					
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	el linicee								
Permit or EPA ID Nu	umber	API Number		Full W	ell Name					
R9UIC-AZ3-FY1		Airitumber		97MF						
State	1-1			J/WII						
Arizona			Pinal							
	directions from nearest lines of	quarter section and d	rilling unit Latitude 33	.043817	52					
Surface Location			Longitude _1	11.43304	419					
NE 1/4 of NV	V 1/4 of Section 33	Township 4S R	ange 9E			_				
	ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.									
Well Class	Timing of Action (pick one)				Type of Action (	pick one)				
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k				
Class II	Date Expected to Comme	nce March 2021								
✓ Class III					✓ Plugging ar	nd Abandonment				
Class V	Report After Work				Conversion	to a Non-Injection Well				
Oluss V	Date Work Ended									
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed. If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.										
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)										
Name and Official T	itle (Please type or print)	Signatu	re	_		Date Signed				
	n, VP - General Manage		Dail	()		10/3/2019				
				/						

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

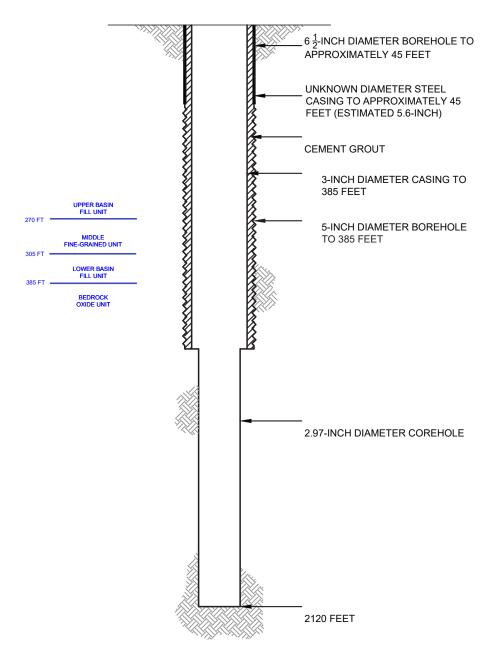
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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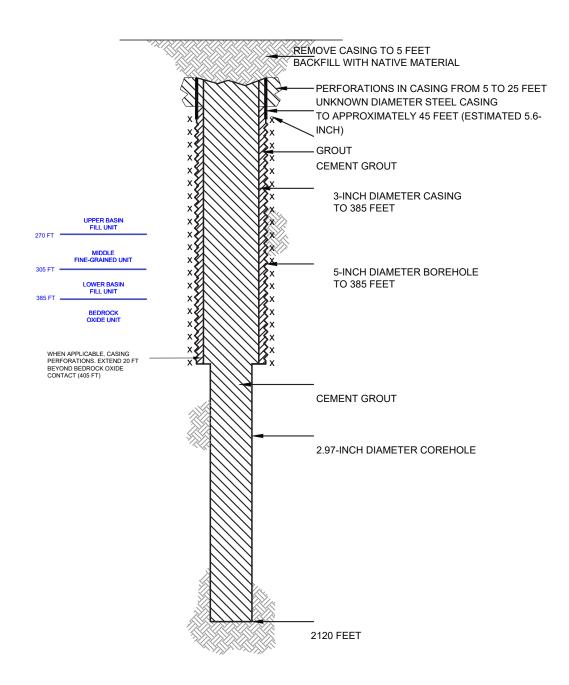
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### **AS-BUILT COREHOLE 60MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 60MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 60MF DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee			15 0					
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	Ι,									
Permit or EPA ID Nu	ımber	API Number				Full W	/ell Name	·		
R9UIC-AZ3-FY1		Airitamboi				100M				
State			I	County		100111	-			
Arizona				Pinal						
Surface Location NE 1/4 of NV	directions from nearest lines of  V 1/4 of Section 33  m (N/S) Line of quart	Township 4S		illing unit	Latitude 33.  Longitude -11	.045003 11.4322				
ft. from (E/W) Line of quarter section.										
Well Class	Timing of Action (pick one)						Type of Action (	pick one)		
Class II  Class III  Class IV	Class II  Class III  Report After Work  Conversion to a Non Injection West							nd Abandonment		
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.										
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)										
Name and Official T	itle (Please type or print)	Si	gnature	9				Date Signed		
	n, VP - General Manage				Dail (	John Marie Contract of the Con		10/3/2019		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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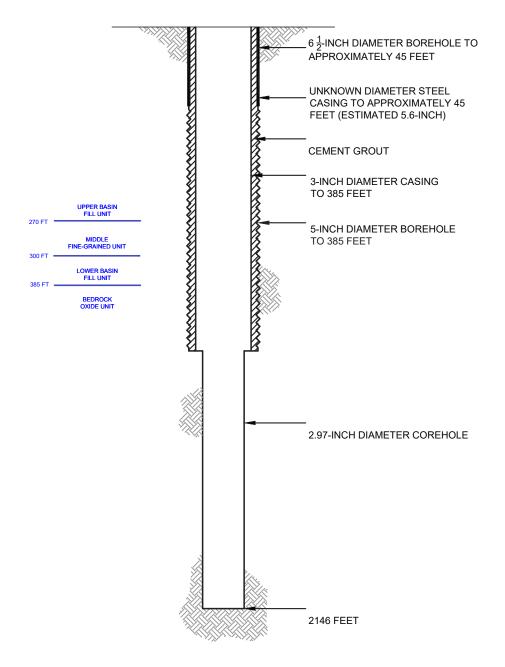
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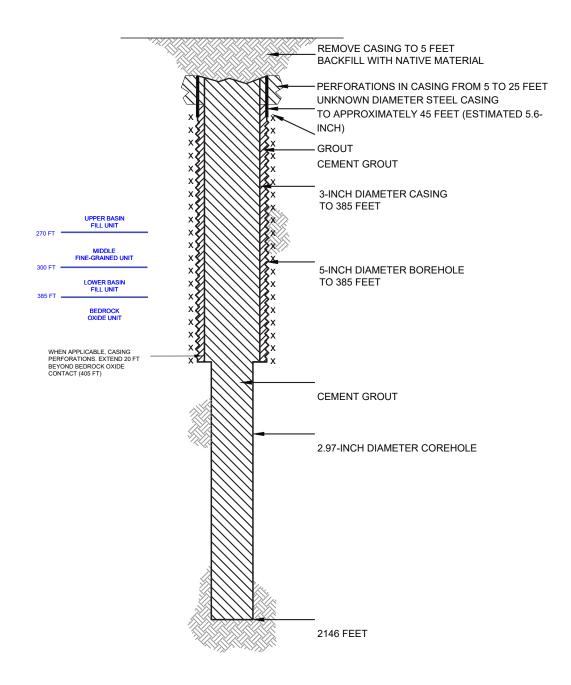
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

### AS-BUILT COREHOLE 100MF



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 100MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 100MF DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	AND ADANDONNE		•					
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	Hilling								
Permit or EPA ID Nu	umber	API Number		Full Well Name						
R9UIC-AZ3-FY1		Airitamber		105MF						
State	1-1		Ιο .	1031411						
Arizona			County Pinal							
Locate well in two	directions from nearest lines of	quarter section and d	Irilling unit Latitude 33	.04856067						
Surface Location	1/4 of Section 28	Township 4S R	Longitude -1	11.4297554						
SW 1/4 of SE	SW 1/4 of SE 1/4 of Section 28 Township 4S Range 9E									
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.										
Well Class	Timing of Action (pick one)			Type of Act	on (pick one)					
Class I	Notice Prior to Work			Well Re	work					
Class II	Date Expected to Comme	nce March 2021								
✓ Class III				Pluggir	g and Abandonment					
Class V	Report After Work			Conver	sion to a Non-Injection Well					
Class V	Date Work Ended				-					
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed. If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.										
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)										
Name and Official T	itle (Please type or print)	Signatu	re		Date Signed					
	n, VP - General Manage		Dail		10/3/2019					

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

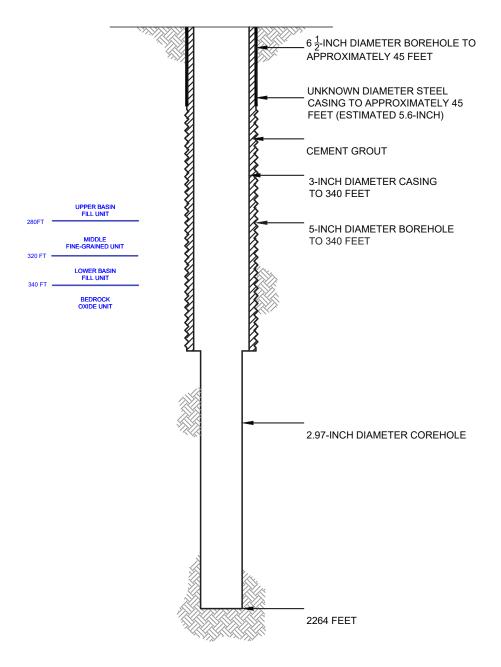
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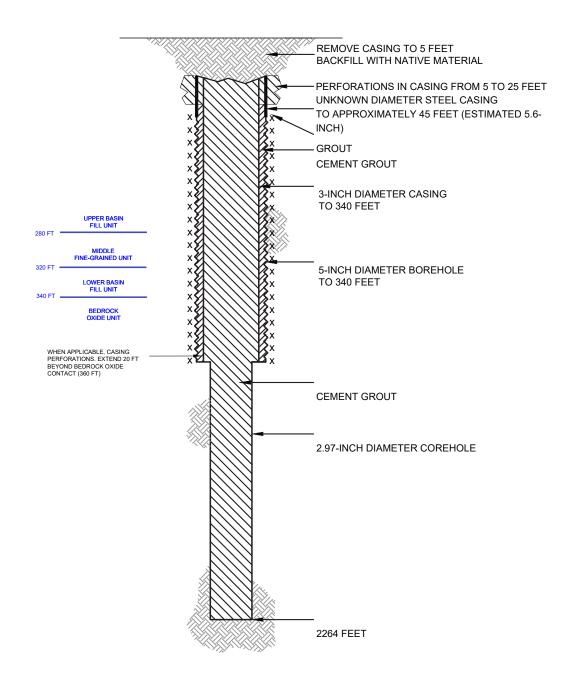
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 105MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 105MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 105MF DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	AND ADANDONNE				
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	el Illitude					
Permit or EPA ID Nu	umber	API Number		Full Well Nan	ne		
R9UIC-AZ3-FY1		ATTRUMBET		106MF			
State	1-1			TOOM			
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and di	rilling unit Latitude 33	.04618096			
	m (N/S) Line of quarter Line of quarter	er section		11.429767182			
	Timing of Action (pick and)						
Class I Class II Class II Class V	Timing of Action (pick one)  Notice Prior to Work  Date Expected to Comme  Report After Work  Date Work Ended	nce March 2021		Typ			
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of celent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforatelow the base of the MFGU to at lewill be used to place Type V cement, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	a bandonment operation depth to which the hole recumented. If necessary, ment seals.  nove it. If removal of the otal to the control of the otal of	is at the required depths will be memains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left agricultural use, the surface casin elow the bedrock-LBFU contact to of the MFGU; and from at least 2 come the bottom of the core hole to be be defined perforated intervals, as need of from 100 feet below the LBFU-be e estimated volume of material re-	oved in and set uns are present in to a depth of at least 10 feet in the hole and pag will be cut at least 20 feet in 5 feet bgs to 5 feet the top of the concessary.	p over the cor the core hole; east 100 feet b erforated as ne east 5 feet bgs above the con- eet bgs.	e hole. the presence elow the eeded to allow and removed. tact; from at ent retainers, as	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	'e		T <sub>1</sub>	Date Signed	
	n, VP - General Manage		Dail	John		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

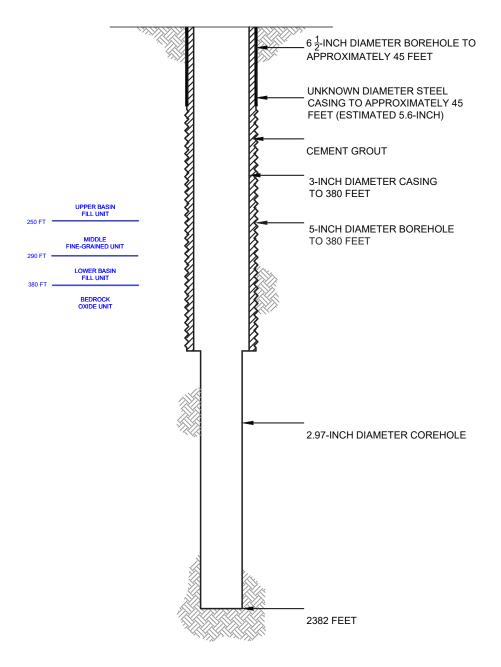
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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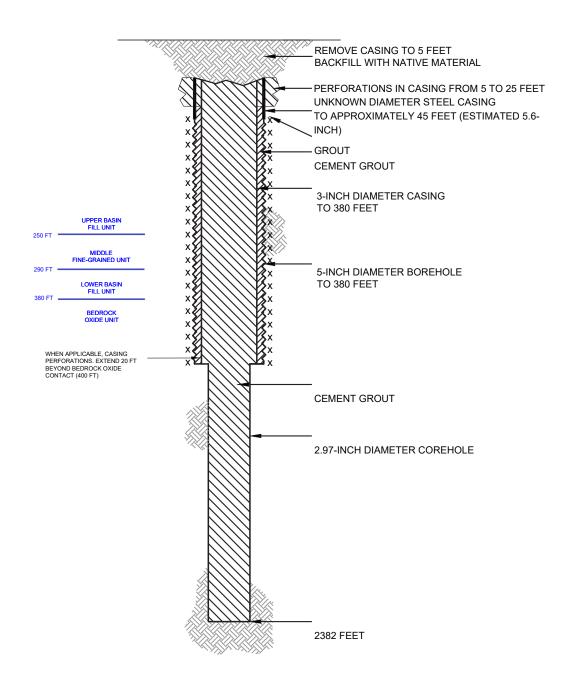
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

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## AS-BUILT COREHOLE 106MF



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 106MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 106MF DIAGRAM



United States Environmental Protection Agency

Name and Address, Pho	ne Number and/or Email of P	ermittee						
Florence Copper Proj. 1575 W Hunt Hwy, Florence, AZ 85132	ect							
Permit or EPA ID Numb	er	API Number				Full V	Vell Name	
R9UIC-AZ3-FY11-1						107N		
State				County		1 4 7 4 1		
Arizona				Pinal				
Surface Location  NW 1/4 of NE  ft. from (I		Township $4S$		illing unit	Latitude 33.	.044982 11.4289		
Well Class Tir	ning of Action (pick one)						Type of Action (	pick one)
Class II  Class III  Class V	ass I  Date Expected to Commence March 2021  Well Rework  ✓ Plugging and Abandonment  Report After Work						nd Abandonment	
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed. If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.								
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)								
Name and Official Title	(Please type or print)	Si	ignature	e				Date Signed
	/P - General Manage		- ·		Dail (	John State of the		10/3/2019

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

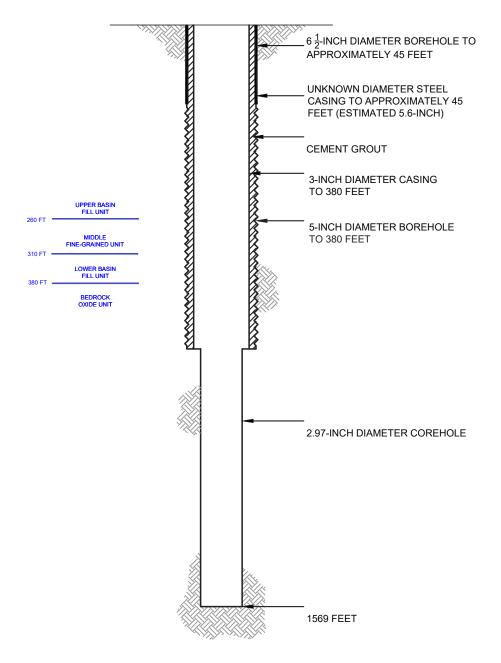
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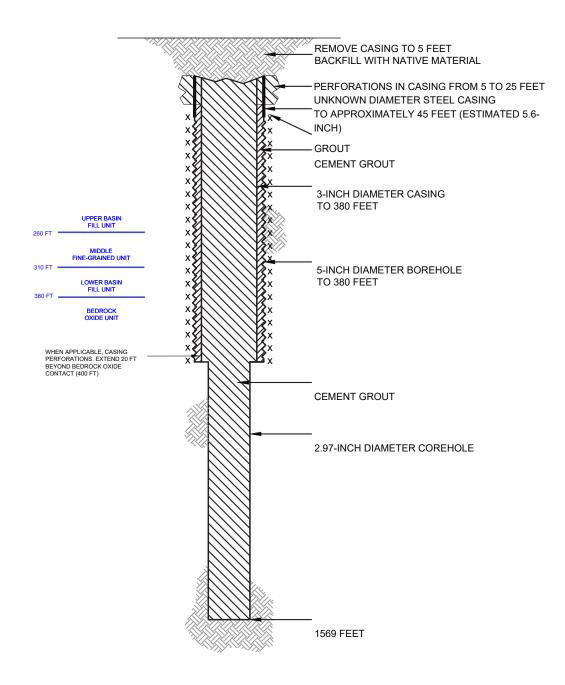
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## **AS-BUILT COREHOLE 107MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 107MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 107MF DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABANDONNIE	INI ALLIDANII			
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project	erimitee.					
Permit or EPA ID No	ımber	API Number		Full Well Name			
R9UIC-AZ3-FY1	1-1			108MF			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33.	.04736087			
Surface Location							
SW 1/4 of SE	1/4 of Section 28	Township 4S Ra	Inge 9E Longitude -11	11.4273604			
ft. fro	m (N/S) Line of quarte	er section	7.5				
Well Class	Timing of Action (pick one)			Type of Action	(pick one)		
Class I	<b>✓</b> Notice Prior to Work			Well Rewe	ork		
Class II	Date Expected to Comme	mce March 2021		Z Blumping	and Abandanmant		
✓ Class III				✓ Plugging	and Abandonment		
Class V	Report After Work Conversion to a Non-Injection						
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of celent, an attempt will be made to renal to be placed to a depth of at least onto the removed, it will be perforate allow the base of the MFGU to at lewill be used to place Type V cement, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	abandonment operations depth to which the hole recumented. If necessary, the ment seals.  The properties of the control of the	s at the required depths will be me mains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left it agricultural use, the surface casinelow the bedrock-LBFU contact to of the MFGU; and from at least 2 come the bottom of the core hole to ehind perforated intervals, as need from 100 feet below the LBFU-be estimated volume of material received.	oved in and set up over the constant are present in the core had to a depth of at least 100 feet in the hole and perforated as go will be cut at least 5 feet both at least 20 feet above the constant of the top of the core hole. Ce bessary.	needed to allow gs and removed.  ontact; from at  ment retainers, as		
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	e		Date Signed		
	n, VP - General Manage	r	2 mil		10/3/2019		
					1		

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Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

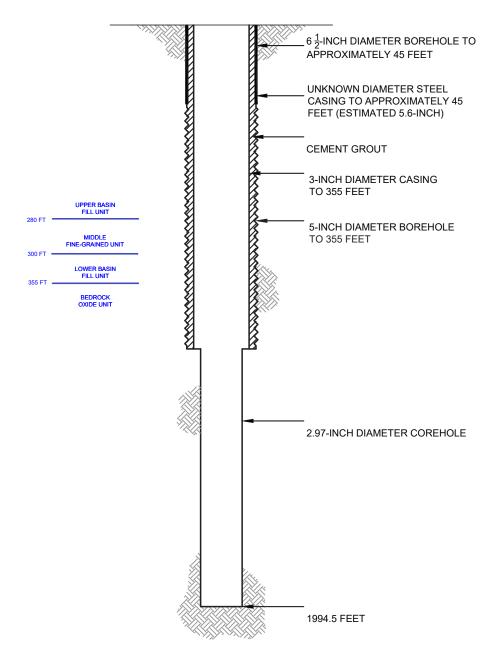
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

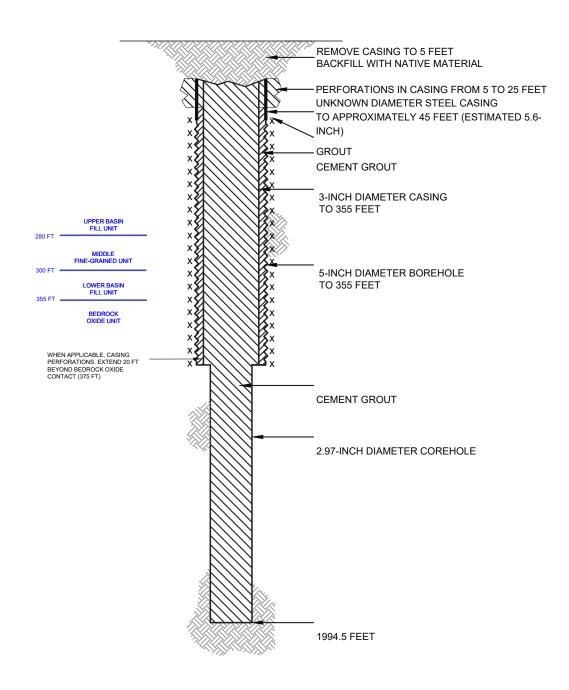
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 108MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 108MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 108MF DIAGRAM



FIGURE 1

United States Environmental Protection Agency

Name and Address, P	hone Number and/or Email of P	ermittee	, ,				
Florence Copper Pr 1575 W Hunt Hwy Florence, AZ 8513	,						
Permit or EPA ID Nu	mber	API Number		Full W	ell Name		
R9UIC-AZ3-FY11				109M			
State			County				
Arizona			Pinal				
Locate well in two d Surface Location NW 1/4 of NW ft. from	n (N/S) Line of quart	Township 4S	drilling unit  Latitude 33  Longitude -1				
Well Class	Timing of Action (nick one)				Type of Action (	nick one)	
Class II  Class III  Class V	ss I ss II Ss III						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Ti	tle (Please type or print)	Signat	ure	_	Ţ	Date Signed	
	, VP - General Manage		Dail	John		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

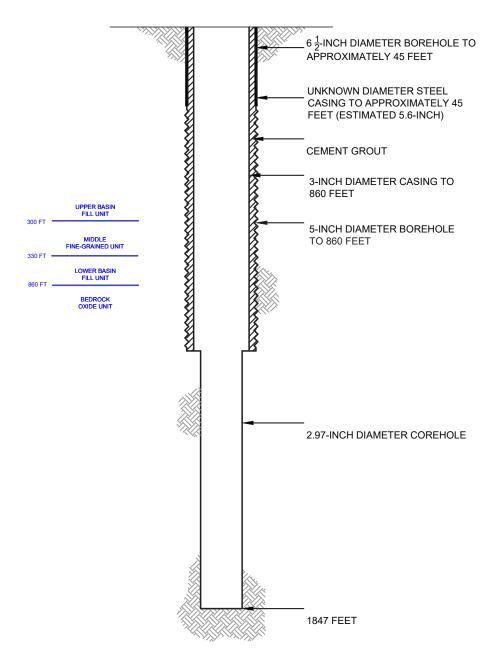
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

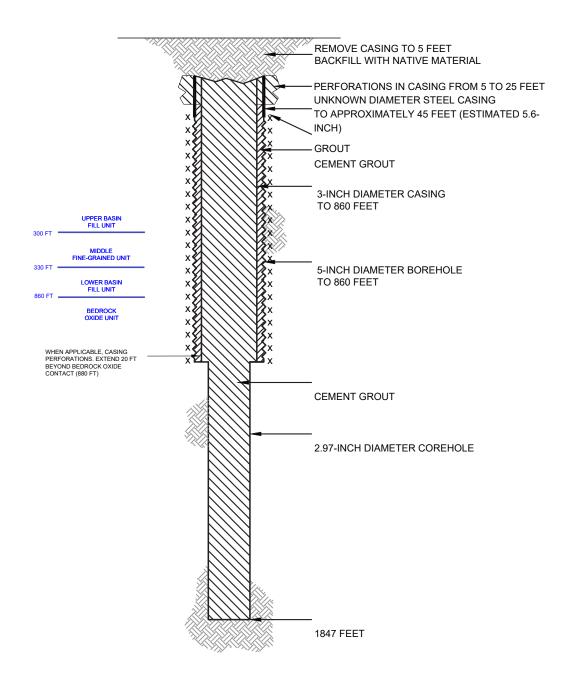
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## AS-BUILT COREHOLE 109MF



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 109MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 109MF DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABANDONNE		, , , ,		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	erimite C					
Permit or EPA ID Nu	umber	API Number		Full Well Name			
R9UIC-AZ3-FY1				110S			
State			County	-			
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.05215789			
Surface Location			Longitude _1	11.4354496			
NW 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	nge 9E	11.4334430			
	m (N/S) Line of quarte						
Well Class	Timing of Action (pick one)			Type of A	ction (pick one)		
Class I	Notice Prior to Work			Well	Rework		
Class II	Date Expected to Comme	nce March 2021		Discourse of the second	oton and Alexandrana.		
✓ Class III				<b>√</b> Pluge	ging and Abandonment		
Class V	Report After Work Conversion to a Non-Injection We						
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cell ent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement we, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	abandonment operations depth to which the hole re cumented. If necessary, the ment seals.  The control of the c	s at the required depths will be memains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left in agricultural use, the surface casing blow the bedrock-LBFU contact to of the MFGU; and from at least 20 common the bottom of the core hole to be celling perforated intervals, as need if from 100 feet below the LBFU-best estimated volume of material research.	oved in and set up over as are present in the co to a depth of at least 10 on the hole and perforating will be cut at least 5 for at least 20 feet above 5 feet bgs to 5 feet bgs to 5 feet bgs. The top of the core hole dessary.	the core hole. re hole; the presence 0 feet below the ed as needed to allow eet bgs and removed. the contact; from at . Cement retainers, as		
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signature	e		Date Signed		
	n, VP - General Manage	r	2 mil	John State of the	10/3/2019		
					[		

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

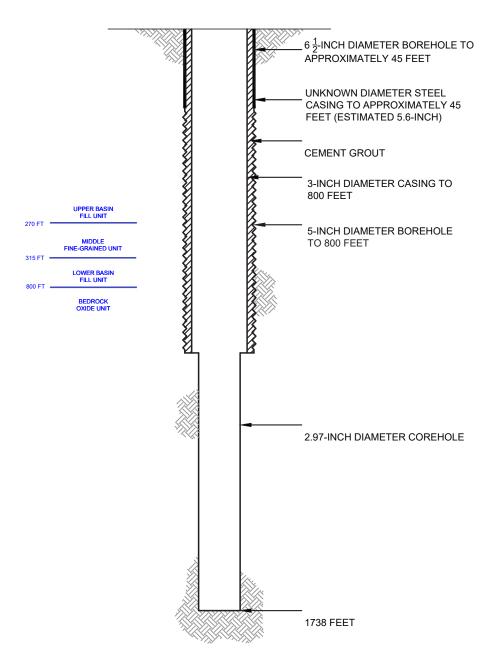
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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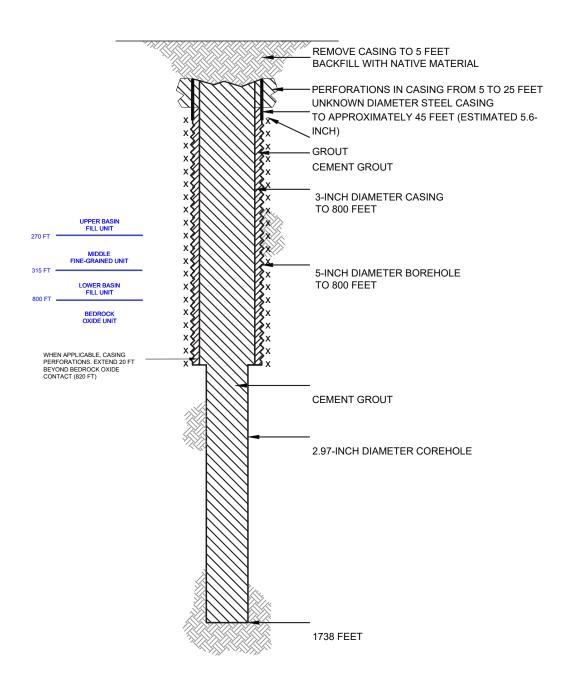
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 110S**



## PROPOSED PLUGGING AND ABANDONMENT COREHOLE 110S





FLORENCE COPPER, INC. FLORENCE, ARIZONA

**COREHOLE 110S DIAGRAM** 



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee					
Florence Copper P 1575 W Hunt Hwy Florence, AZ 8513	у,						
Permit or EPA ID Nu	ımber	API Number		Full W	/ell Name	·	
R9UIC-AZ3-FY1		Arritambor		123M			
State			County	120111			
Arizona			Pinal				
Surface Location NW 1/4 of NE	1/4 of Section 33  m (N/S) Line of quart	Township 4S	Latitude 33	3.043799 11.4297			
Well Class	, ,	er section.			Type of Action (	nick one)	
Class II  Class III  Class IV	Date Expected to Commence March 2021    Plugging and Abandonment   Conversion to a Non Injection						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed. If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Sign	ature	_		Date Signed	
	n, VP - General Manage		Dail	Grand Contraction of the Contrac		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

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Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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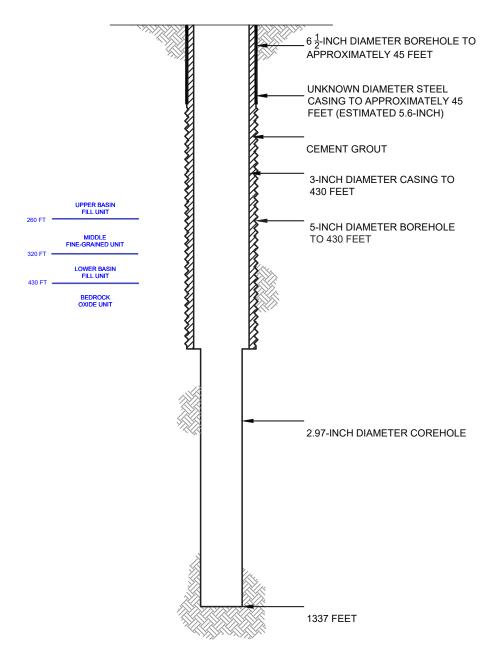
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

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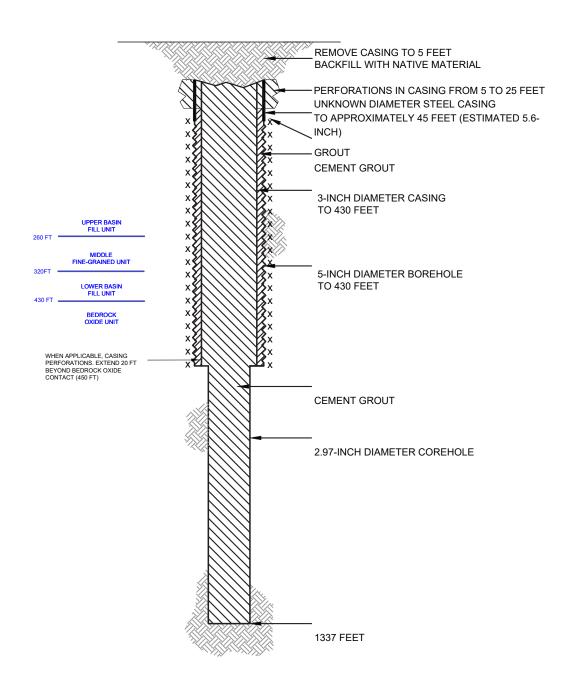
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 123MF**



## PROPOSED PLUGGING AND ABANDONMENT COREHOLE 123MF





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 123MF DIAGRAM



United States Environmental Protection Agency

Name and Address, F	Phone Number and/or Email of P	ermittee	7.1.12 7.127.1.12 0.1.11		,		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	у,						
Permit or EPA ID Nu	ımber	API Number		Full	Well Name	1	
R9UIC-AZ3-FY1		ATTRUMBU		124			
State			County	12	1111		
Arizona			Pinal				
Surface Location SW 1/4 of SE	1/4 of Section 28	Township 4S	Latitude	33.0485 111.426			
ft. fro	m (E/W) Line of quart	er section.					
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class II  ✓ Class III  Class V	Notice Prior to Work  Date Expected to Commence March 2021  Report After Work  Date Work Ended  Well Rework  Plugging and Abandonment  Conversion to a Non-Injection William						
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet above the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs to 5 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement, or equivalent approved in accordance with the UIC Permit.							
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Sigr	ature			Date Signed	
	n, VP - General Manage		Dai	2 John		10/3/2019	

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

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**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

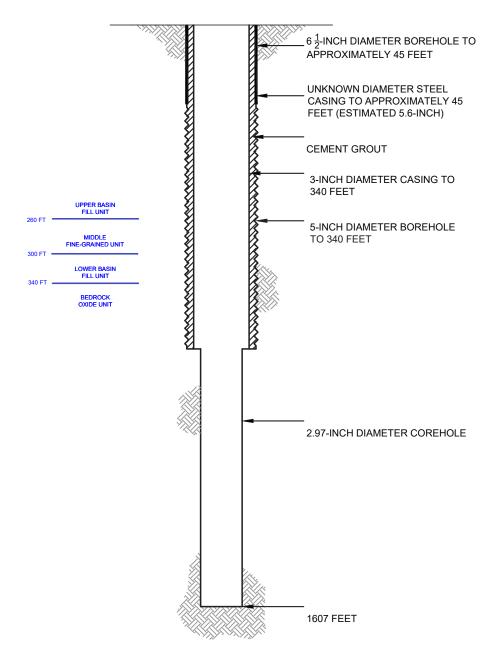
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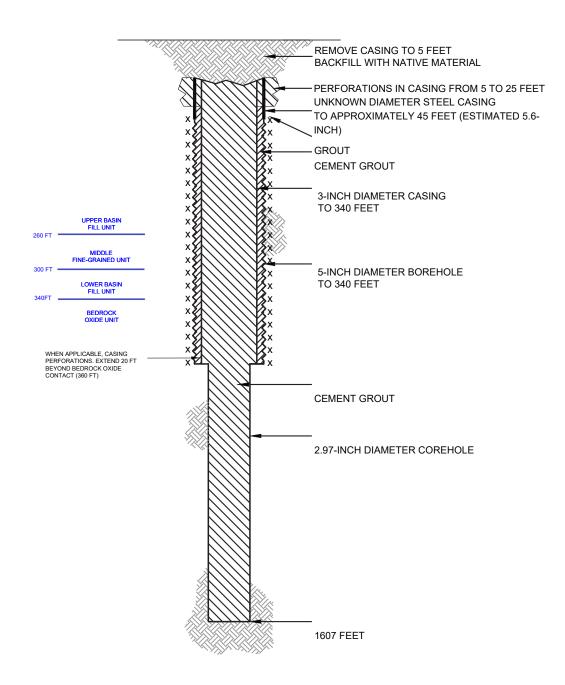
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 124MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 124MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 124MF DIAGRAM



United States Environmental Protection Agency

Name and Address, Phone		ermittee		-141 / \			
Florence Copper Projec 1575 W Hunt Hwy, Florence, AZ 85132		Time Co					
Permit or EPA ID Number		API Number		Full We	II Name		
R9UIC-AZ3-FY11-1				127MF	=		
State			County				
Arizona			Pinal				
NW	Line of quarte	Township 4S Ra	c Lantade 33	3.043805 11.43466			
Well Class Timin	ng of Action (pick one)				Type of Action (	nick one)	
Class II  Class III  Class V	Notice Prior to Work  Date Expected to Commer  Report After Work  Date Work Ended	March 2021			Well Rework  Plugging an		
A workover rig capab The core hole will be and condition of any bedrock-LBFU contact If collar is present, ar an annular seal to be If the collar cannot be least 20 feet below the A tremie pipe will be described above, will If the hole has been of	le of performing the required inspected to determine the dexisting collar will also be do not to enable placement of cert attempt will be made to remplaced to a depth of at least the removed, it will be perforate the base of the MFGU to at least used to place Type V cement be used to force cement groupstructed, as much cement in the control of the second se	abandonment operations eight to which the hole recumented. If necessary, the nent seals.  I also seals to the control of the c	was performed. Use additional is at the required depths will be more mains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left it agricultural use, the surface casing allow the bedrock-LBFU contact to of the MFGU; and from at least 2 to me the bottom of the core hole to ehind perforated intervals, as need if from 100 feet below the LBFU-be a estimated volume of material reduced in the core in t	oved in and no are pres to a depth of in the hole ng will be cut to at least 20 the top of the cessary.	d set up over the cosent in the core hole of at least 100 feet band perforated as nut at least 5 feet bgs.  Of feet above the cort to 5 feet bgs.  The core hole. Ceminated to the top of the	re hole. the presence below the seeded to allow and removed. stact; from at sent retainers, as see core hole.	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official Title (I	Please type or print)	Signature	e		T	Date Signed	
	P - General Manage		Dail	J	_	10/3/2019	

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For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

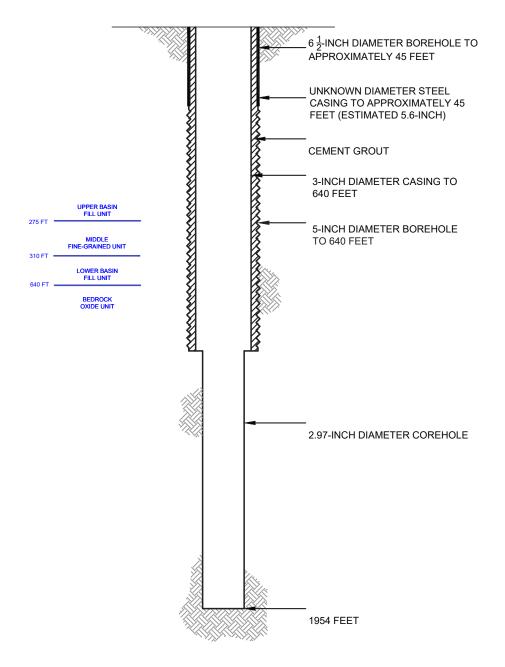
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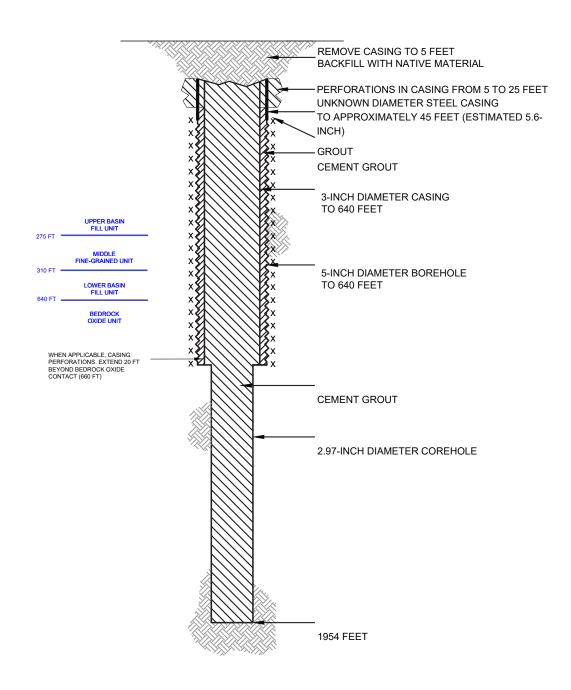
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 127MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 127MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 127MF DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ADAILDONNIE	-111 /	IIIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,						
Permit or EPA ID Nu	umber	API Number		Full We	II Name		
R9UIC-AZ3-FY1				128MF			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0533464	3		
Surface Location			Longitude _11	11.43460	63		
SW 1/4 of NV	W 1/4 of Section 28	Township 4S Ra	inge 9E	11.43400	03		
	m (N/S) Line of quarto						
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	Notice Prior to Work				Well Rework	(	
Class II	Date Expected to Comme	nce March 2021					
✓ Class III					✓ Plugging an	d Abandonment	
Class V	Report After Work Conversion to a Non-Injection We						
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cell ent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement ve, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	abandonment operations depth to which the hole recumented. If necessary, the ment seals.  The properties of the control of the	s at the required depths will be memains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left in agricultural use, the surface casing blow the bedrock-LBFU contact to of the MFGU; and from at least 20 common the bottom of the core hole to be celling perforated intervals, as need if from 100 feet below the LBFU-best estimated volume of material research.	oved in and ns are pres to a depth of in the hole ng will be cut of at least 20 at least 20 the top of the top of the cessary.	d set up over the cosent in the core hole of at least 100 feet band perforated as nut at least 5 feet bgs.  Of feet above the cort to 5 feet bgs.  The core hole. Ceminated to the top of the	re hole. the presence below the seeded to allow and removed. stact; from at sent retainers, as se core hole.	
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Name and Official T	itle (Please type or print)	Signatur	e			Date Signed	
	n, VP - General Manage	r	2 ail	Cyl.		10/3/2019	
				,			

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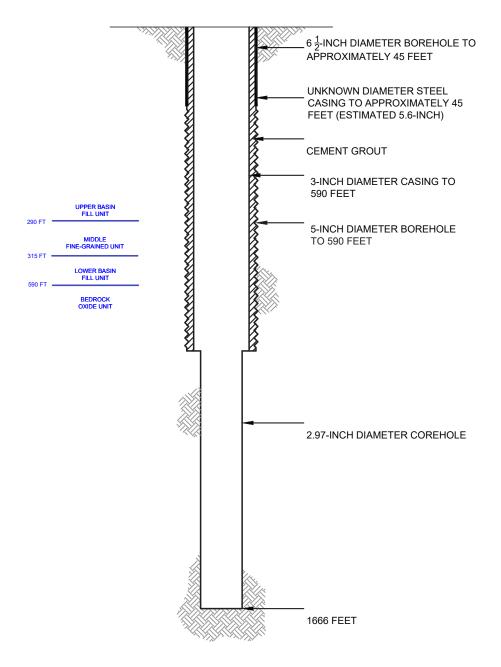
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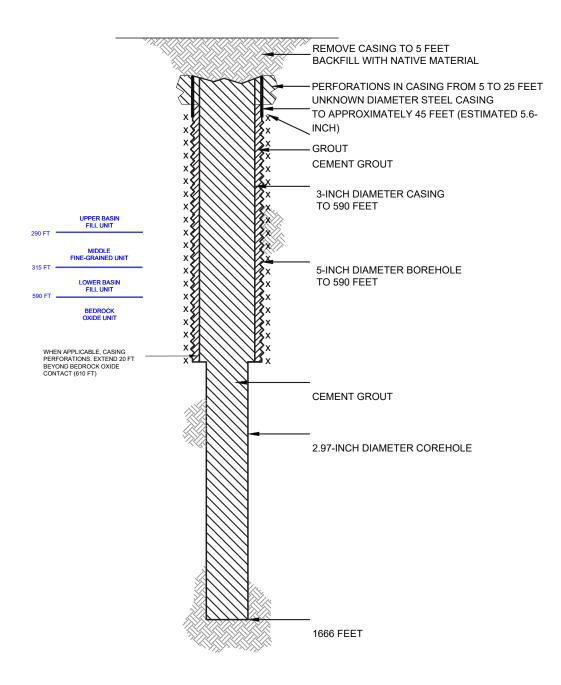
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## **AS-BUILT COREHOLE 128MF**



## PROPOSED PLUGGING AND ABANDONMENT COREHOLE 128MF





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 128MF DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IND ABAILDONNIE	-111 /	HIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,						
Permit or EPA ID Nu	umber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1	1-1			129S			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33.	.0509290	66		
Surface Location						_	
NE 1/4 of SV	V 1/4 of Section 28	Township 4S Ra	Inge 9E Longitude -11	11.43129	978		
ft. fro	m (N/S) Line of quarto	er section	<i>7</i> L				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	mce March 2021			/ Blugging or	nd Abandanmant	
✓ Class III					✓ Plugging ar	nd Abandonment	
Class V	Report After Work		_		Conversion	to a Non-Injection Well	
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cell ent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement we, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded are by Cement, or equivalent approved.	abandonment operations depth to which the hole recumented. If necessary, the ment seals.  The properties of the control of the	s at the required depths will be me mains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left it agricultural use, the surface casinelow the bedrock-LBFU contact to of the MFGU; and from at least 2 come the bottom of the core hole to ehind perforated intervals, as need from 100 feet below the LBFU-be estimated volume of material received.	oved in an are pre- to a depth in the hole ing will be co o at least 2 5 feet bgs the top of cessary.	and set up over the co sent in the core hole of at least 100 feet I e and perforated as nout at least 5 feet bgs 20 feet above the core to 5 feet bgs.	re hole. ; the presence pelow the seeded to allow and removed. htact; from at sent retainers, as see core hole.	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed	
	n, VP - General Manage	r	2 mil	John State of the		10/3/2019	
			,				

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For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

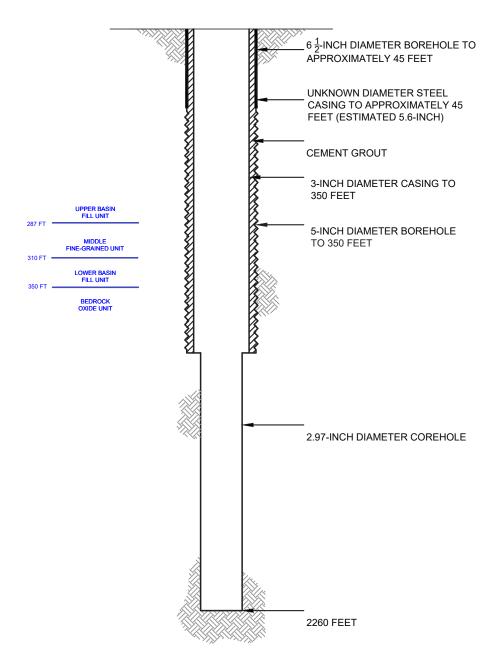
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

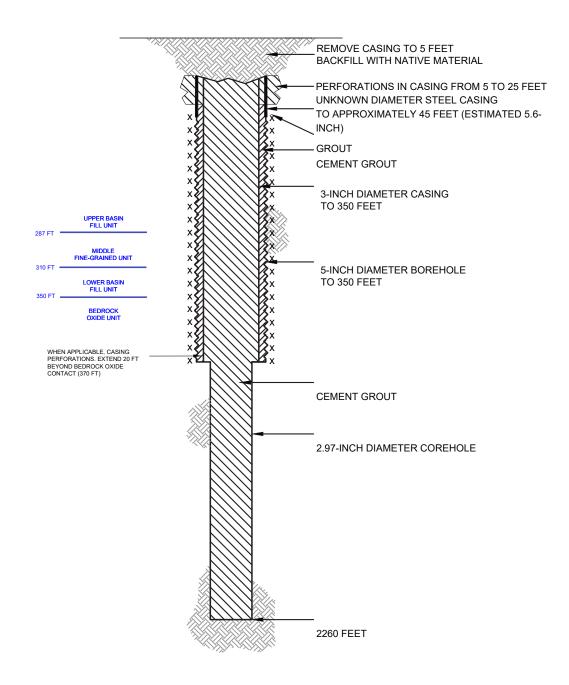
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 129S**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 129S**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 129S DIAGRAM



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	IIID ADAIIDOIIIIE	-1111 /	IIIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project						
Permit or EPA ID Nu	umber	API Number		Full We	ell Name		
R9UIC-AZ3-FY1	1-1			131MF			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and dr	illing unit Latitude 33	.0485210	06		
Surface Location						_	
SE 1/4 of SE	1/4 of Section 28	Township 4S Ra	Longitude -11	11.42324	36		
ft. fro	m (N/S) Line of quarto	er section	- 72				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	<b>✓</b> Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	mce March 2021			Dlugging or	d Abandonment	
✓ Class III					✓ Plugging ar	iu Abanuoninent	
Class V	Report After Work Conversion to a Non-Inje						
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of celent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate allow the base of the MFGU to at lewill be used to place Type V cement, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded and a V cement, or equivalent approved.	abandonment operation: depth to which the hole re cumented. If necessary, ment seals.  nove it. If removal of the c 25 feet bgs. In areas of a ed from at least 20 feet be ast 20 feet above the top  It in the open core hole fro out into the annulus and b as possible will be placed and will not be less than the	s at the required depths will be memains open and if any obstruction the core hole will be cleaned out to collar is not feasible, it will be left agricultural use, the surface casin elow the bedrock-LBFU contact to of the MFGU; and from at least 2 come the bottom of the core hole to be be a compared intervals, as need of from 100 feet below the LBFU-be e estimated volume of material re-	oved in an an are presto a depth in the hole and will be contact at least 2.25 feet bgs.  The top of cessary.	d set up over the co sent in the core hole of at least 100 feet I and perforated as n ut at least 5 feet bgs 0 feet above the cor to 5 feet bgs. the core hole. Cem	re hole. ; the presence below the eeded to allow and removed. stact; from at ent retainers, as e core hole.	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	itle (Please type or print)	Signatur	е			Date Signed	
	n, VP - General Manage	r	Dail	John	_	10/3/2019	
				,			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

FULL WELL NAME: Enter the full name of the well or project.

Enter the **STATE** and **COUNTY** where the well is located. For States that do not have counties, use the name of that State's equivalent jurisdiction at a more local level.

**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

Provide a **NARRATIVE DESCRIPTION** of the work planned to be performed, or that was performed. The narrative should include a description of the main procedures planned or that occurred during the work activity. A service company report, daily report, or similar document may be attached if it includes all the requested information and is clear and legible.

For well reworks, include the following information: The reason for the well rework; depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; method(s) to demonstrate that the well has mechanical integrity (as applicable); and any deviations from the approved rework plan (as applicable).

For a well plugging plan, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; and wait-on-cement times, if any. Also provide one or more cost estimates from an independent firm in the business of plugging and abandoning wells to plug the well as described in the plan.

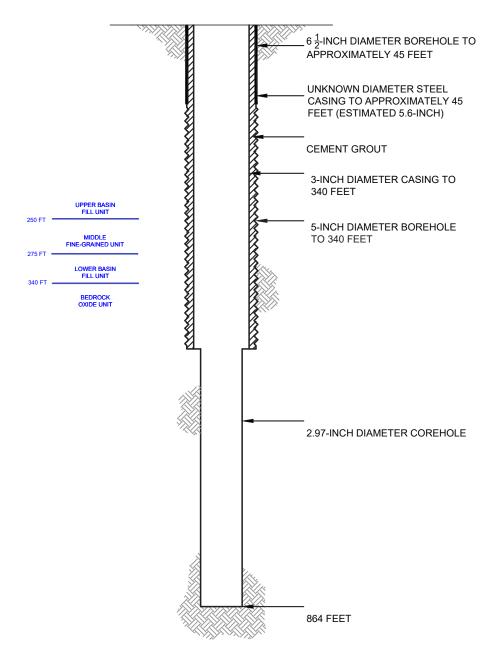
For well plugging affidavit, include the following information: Reason for the well plugging; number of plugs placed, and their depths; materials used as plugs (e.g., cast iron bridge plug, cement, cement retainer); method to set plugs; wait-on-cement times, if any; and any deviations from the approved plugging plan (if applicable).

For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

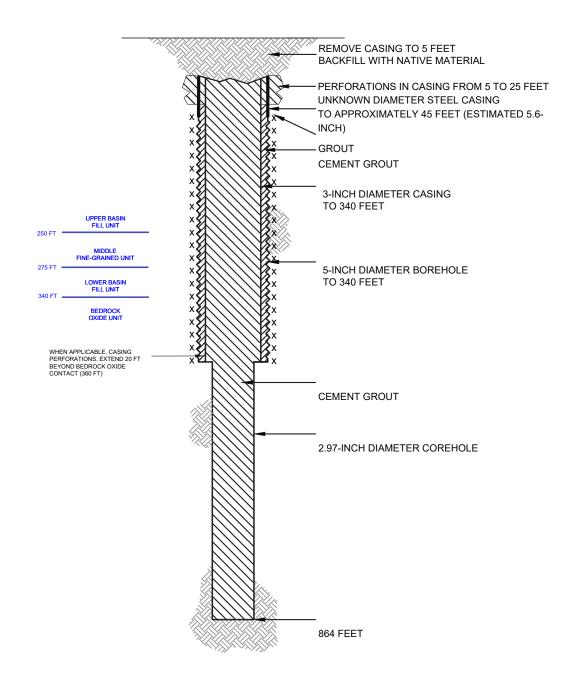
For all of the above activities, include a well sketch depicting the work, results of well tests/logging performed, service company tickets, and any other available information demonstrating how the work was/is to be performed. Also, specify whether depths are below ground surface, relative to Kelly bushing, etc.

**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 131MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 131MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 131MF DIAGRAM

FIGURE 1



United States Environmental Protection Agency

Name and Address. F	Phone Number and/or Email of P	ermittee	AND ADANDONNE	_111 /	HIDAVII		
Florence Copper F 1575 W Hunt Hwy Florence, AZ 8513	Project y,	oniineed					
Permit or EPA ID Nu	umber	API Number		Full W	ell Name		
R9UIC-AZ3-FY1	1-1			132M			
State			County				
Arizona			Pinal				
Locate well in two	directions from nearest lines of	quarter section and o	Irilling unit Latitude 33	.047362	09		
Surface Location						_	
SW 1/4 of SE	1/4 of Section 28	Township 4S	Range 9E Longitude -1	11.42893	363		
ft. fro	m (N/S) Line of quarto	er section	J. SE				
Well Class	Timing of Action (pick one)				Type of Action (	pick one)	
Class I	Notice Prior to Work				Well Rewor	k	
Class II	Date Expected to Comme	mce March 2021			/ Plugging or	nd Abandonment	
✓ Class III					✓ Plugging ar	iu Abandoninent	
Class V	Report After Work Conversion to a Non-Injection						
	Date Work Ended						
A workover rig The core hole and condition of bedrock-LBFU  If collar is pres an annular sea  If the collar car least 20 feet both  A tremie pipe with described about  If the hole has The volume of	capable of performing the required will be inspected to determine the of any existing collar will also be do contact to enable placement of cell ent, an attempt will be made to renal to be placed to a depth of at least not be removed, it will be perforate elow the base of the MFGU to at lewill be used to place Type V cement we, will be used to force cement group been obstructed, as much cement. Type V cement will be recorded are at V cement, or equivalent approved.	abandonment operation depth to which the hole recumented. If necessary ment seals.  nove it. If removal of the 25 feet bgs. In areas of ed from at least 20 feet least 20 feet above the top tin the open core hole fout into the annulus and as possible will be placed will not be less than the	remains open and if any obstruction, the core hole will be cleaned out to collar is not feasible, it will be left if agricultural use, the surface casin below the bedrock-LBFU contact to p of the MFGU; and from at least 2 from the bottom of the core hole to behind perforated intervals, as need from 100 feet below the LBFU-base estimated volume of material re	noved in ar ns are preto a depth in the hole ng will be o o at least 2 25 feet bgs the top of cessary.	and set up over the consent in the core hole of at least 100 feet less and perforated as rout at least 5 feet bgs.  20 feet above the consist to 5 feet bgs.	re hole. ; the presence pelow the seeded to allow and removed. htact; from at ent retainers, as e core hole.	
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. (Ref. 40 CFR § 144.32)							
Name and Official T	Title (Please type or print)	Signatu	re			Date Signed	
	n, VP - General Manage		Dail	Colonia de la co		10/3/2019	
				/			

This form replaces forms 7520-12 and 7520-14. Use this form only when work is planned or has occurred that affects the well's construction or operation as an injection well, including work on the casing, tubing or packer (or for shallow Class V wells, the subsurface fluid emplacement network). Use one form per injection well. While reports or other information developed by contractors or service companies may be attached, this form must be signed by a responsible entity as described at 40 CFR 144.32. Note: operators closing Class V wells should use Form 7520-17.

**NAME, ADDRESS, PHONE AND/OR EMAIL OF PERMITTEE**: Enter the name and street address, city/town, state, and ZIP code of the permittee. Also provide an email address (if available) and/or a phone number.

PERMIT OR EPA ID NUMBER: Enter the well identification number or permit number assigned to the well by the EPA or the permitting authority.

**API NUMBER:** Enter the number assigned by the local jurisdiction (usually a State Oil and Gas Agency) using the American Petroleum Institute standard numbering system.

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**WELL LOCATION:** Fill in the complete township, range, and section to the nearest quarter-quarter section. A township is north or south of the baseline, and a range is east or west of the principal meridian (e.g., T12N, R34W). Also include the distance, in feet, from the nearest north or south line and nearest east or west line of the quarter-section. Also, enter the **latitude** and **longitude** of the well in decimal degrees, to five or six places if possible; be sure to include a negative sign for the longitude of a well in the Western Hemisphere and a negative sign for the latitude of a well in the Southern Hemisphere.

Enter the WELL CLASS, i.e., the class of injection well as defined in 40 CFR 144.6.

**TIMING OF THE ACTION:** Check *Notice prior to work* if the activity has not yet occurred (i.e., is planned). Check *Report after work* if the activity described has already occurred. As appropriate, include the date the activity is expected to start or the date the activity was completed. (Note this may not be available, e.g., for a plugging plan submitted with a permit application.)

**TYPE OF ACTION:** Check the appropriate box to describe the kind of activity being reported. Check *Well Rework* for work that was/will be performed on the well after it has already been in operation as an injection well. Check *Plugging and Abandonment* to report on plans for or descriptions of final closure/plugging after use as an injection well. Check *Conversion to a Non-Injection Well* if the well is to be converted to something other than an injection well.

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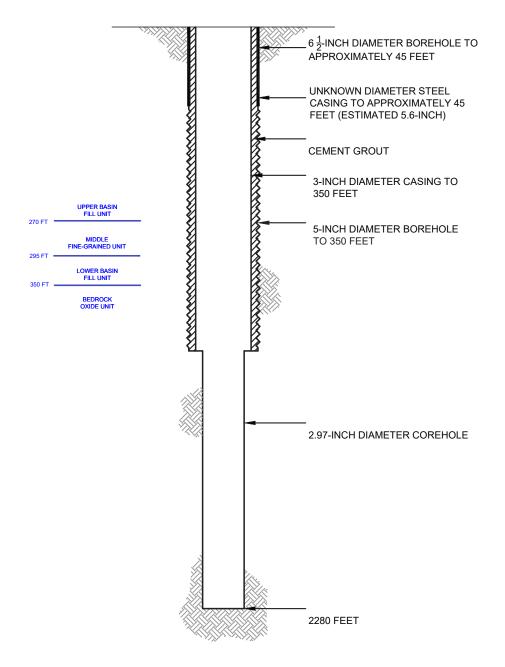
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For conversion to a non-injection well, include the following information: Depths of activity; type of activity; changes to injection well configuration, well casing, or cement behind casing; any plug added to the well and its depth; any newly drilled interval and its depth; depths of new perforations; and method(s) to demonstrate that the well has mechanical integrity (as applicable).

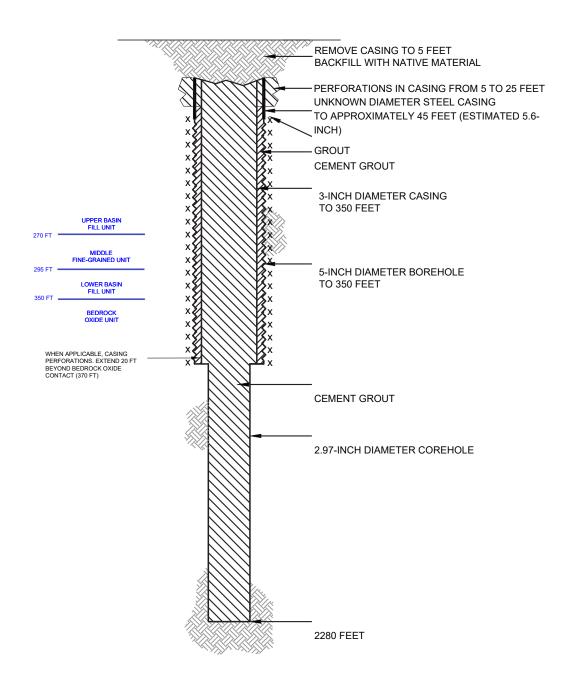
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**CERTIFICATION:** This form must be signed and dated by either: a responsible corporate officer for a corporation, by a general partner for a partnership, by the proprietor of a sole proprietorship, or by a principal executive or ranking elected official for a public agency.

## **AS-BUILT COREHOLE 132MF**



## PROPOSED PLUGGING AND ABANDONMENT **COREHOLE 132MF**





FLORENCE COPPER, INC. FLORENCE, ARIZONA

COREHOLE 132MF DIAGRAM



United States Environmental Protection Agency

Name and Address, Phone Number and/or Email of Permittee						
Florence Copper Project 1575 W Hunt Hwy, Florence, AZ 85132						
Permit or EPA ID Number API Number			Full Well Name			
R9UIC-AZ3-FY11-1			136S			
State			County			
Arizona Pinal						
Locate well in two directions from nearest lines of quarter section and drilling unit  Latitude 33.05212428						
Surface Location  NE 1/4 of SW 1/4 of Section 28 Township 4S Range 9E  Longitude -111.4321636						
ft. from (N/S) Line of quarter section  ft. from (E/W) Line of quarter section.						
Well Class	Timing of Action (pick one)				Type of Action (	pick one)
Class I Class II Class III Class V	Notice Prior to Work  Date Expected to Commence March 2021  Report After Work  Date Work Ended					k nd Abandonment to a Non-Injection Well
Provide a narrative description of the work planned to be performed, or that was performed. Use additional pages as necessary. See instructions.  A workover rig capable of performing the required abandonment operations at the required depths will be moved in and set up over the core hole. The core hole will be inspected to determine the depth to which the hole remains open and if any obstructions are present in the core hole; the presence and condition of any existing collar will also be documented. If necessary, the core hole will be cleaned out to a depth of at least 100 feet below the bedrock-LBFU contact to enable placement of cement seals.  If collar is present, an attempt will be made to remove it. If removal of the collar is not feasible, it will be left in the hole and perforated as needed to allow an annular seal to be placed to a depth of at least 25 feet bgs. In areas of agricultural use, the surface casing will be cut at least 5 feet bgs and removed.  If the collar cannot be removed, it will be perforated from at least 20 feet below the bedrock-LBFU contact to at least 20 feet above the contact; from at least 20 feet below the base of the MFGU to at least 20 feet above the top of the MFGU; and from at least 25 feet bgs.  A tremie pipe will be used to place Type V cement in the open core hole from the bottom of the core hole to the top of the core hole. Cement retainers, as described above, will be used to force cement grout into the annulus and behind perforated intervals, as necessary.  If the hole has been obstructed, as much cement as possible will be placed from 100 feet below the LBFU-bedrock contact to the top of the core hole.  The volume of Type V cement will be recorded and will not be less than the estimated volume of material required to fill each interval. All cement grout will consist of Type V cement, or equivalent approved in accordance with the UIC Permit.						
Certification  I certify under the penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibliity of fine and imprisonment. (Ref. 40 CFR § 144.32)						
Name and Official T	itle (Please type or print)	Signatur	e			Date Signed
Dan Johnson	n, VP - General Manage	r	Dail	Colonia de la co		10/3/2019